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Jan. - June

1904

The Southern Planter.

DEVOTED TO

**PRACTICAL AND PROGRESSIVE AGRICULTURE, HORTICULTURE,
TRUCKING, LIVE STOCK AND THE FIRESIDE.**

Agriculture is the nursing mother of the Arts.--XENOPHON.
Tillage and pasturage are the two breasts of the State.--SULLY.

65th Year.

Richmond, January, 1904.

No. 1.

Agricultural Teachers and Writers of the Present Day.

For a number of years past we have made it a practice to issue a special holiday number of THE SOUTHERN PLANTER on the 1st of January each year, making a feature of some special matter in addition to the regular departments run each month in the journal. In this way we have in the past commemorated the sixtieth anniversary of the issue of THE SOUTHERN PLANTER by a comparison of the condition of Southern agriculture when THE PLANTER was first issued, in 1840, and the condition of the farms and farmers sixty years afterwards. In another special issue we published a most valuable history of agricultural progress in the South for one hundred years. In our special issue of last year we dealt with the progress of live stock husbandry in the South, illustrating the same with some of the finest pictures of live stock ever published in the South. Turning over in our minds what should be the special feature this year, we came to the conclusion that it would be of great interest to our readers to know something of the leading agricultural teachers and writers of the present day, whose thoughts and experiments we have so frequently to quote in support of the work we are doing in endeavoring to uplift agriculture in the South. In connection with these sketches, we decided that it would add to the interest by presenting pictures of these gentlemen, so that our readers might see for themselves the manner of men who are devoting themselves to the elucidation of the problems confronting farmers, and seeking to make agricul-

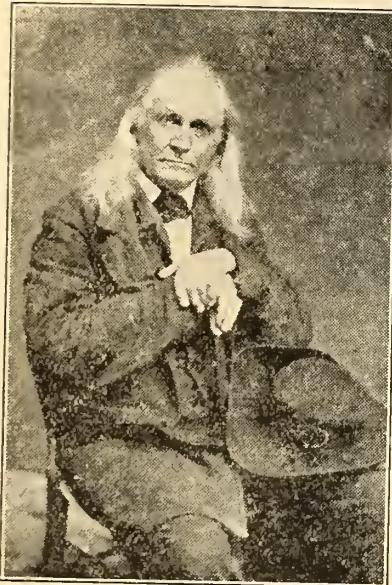
ture and live stock husbandry more of certain sciences than they have been in the past. Whilst the pictures and sketches which we offer comprise only a small number of those who are prominent in this good work, they will, we think, present those who are best known amongst Southern agricultural educators, and some of those who are especially identified with special lines of work in other parts of the country, and whose work will have permanent influence upon the advancement of agriculture and live stock breeding throughout the whole country. When we decided upon this special feature for this issue we could not fail to remember that the South produced the first man (Edmund Ruffin) who, in this country, endeavored to apply science to the advancement of agriculture, and we felt that it would ill become us not to give a likeness of this gentleman, and a short sketch of his work in connection with that of the modern teachers and writers, whose features and work we desire to place in permanent record before our readers. To enable us to do this, we applied to the Hon. Julian Ruffin, of Hanover county, Va., the grandson of Edmund Ruffin, a worthy scion of his ancestor and a most successful farmer, for a likeness of Mr. Ruffin and for such information as he could give us on the subject. He at once sent us a small, old photograph of Mr. Ruffin, from which we have produced our likeness of the man, and a short sketch of his life work compiled by W. P. Cutter, the Librarian of the Department of Agriculture, which we reproduce:

EDMUND RUFFIN.

A PIONEER IN AGRICULTURAL SCIENCE.

Agriculture in Colonial Virginia.

The existence of the colony of Virginia was dependent to a great extent on the cultivation of a single agricultural product, tobacco, which was not only the



staple crop of the colony for nearly two centuries, but served as a medium of exchange and as the basis for governmental support by taxation. Soon after the founding of the Virginia settlements, a decree of the English King, James I., legalized the tobacco trade, and every available piece of ground in the village of Jamestown was at once planted in tobacco. The enormous profits made by

the planters attracted large numbers of settlers; new lands were cleared, and growing tobacco soon covered them.

The agriculture of colonial Virginia was extremely crude in character. The staple food crops were cultivated only to the extent necessary to provide food for the laborers employed in tobacco cultivation, which was the main end to which everything else was subordinated. Although the colony became very prosperous as a result of the enormous demand for tobacco and the comparatively slight cost of raising the crop, much of the depression which followed the war of the Revolution may be ascribed to the continuous growth of this one crop for such a long period of time. The operations of the farm were so similar in character from year to year that little attention was paid to the details of farm management by the planters themselves, who spent the major part of their time in the exercise of the rites of hospitality, even now so proverbial a characteristic of Virginians. The agricultural interests of the State suffered from this lethargy of the most intelligent of her citizens, being left in care of plantation overseers, who were often not much less ignorant than the slaves whose labors they superintended.

With the war of the Revolution came the interruptions to commerce incident to the struggle. The profits of tobacco culture being suddenly decreased, more attention was paid to the raising of other crops. With the outbreak of the French Revolution and the wars

which followed, the demand for cereals became so great, the price rising in proportion, that every planter abandoned his tobacco fields to the cultivation of food stuffs; but the soil, although fertile in the beginning, had so long been subjected to the exhausting demands of the tobacco crop that the yield of wheat was small.

In the early history of the colony, land was plentiful. When a field ceased to yield profitably, it was an easy matter to use the laboring force during the comparatively idle winter season in clearing new land for cultivation. A time came, however, when the land covered by the original forest was scarce, and the fertility once present had been reduced by exhaustive cropping. The great profits of the past had disappeared as a result of careless management. The demand for cereals decreased with the universal peace which succeeded the fall of Napoleon, and the planters of Virginia found themselves confronted by very depressing conditions: a period of comparative stagnation ensued. Some of the farmers had made attempts to introduce cotton cultivation without great success. Tobacco raising was confined to a large extent to the upland counties, where the land was less exhausted and where special methods of curing still made the crop a profitable one; but in the eastern and middle section there seemed to be no possible method of regaining the former prosperity. Many of the old Virginia families, attracted by the marvellous tales of the fertility of the newly settled prairies of the West, deserted their ancestral homes and sought new fields for their efforts. The price of land decreased, and taxes increased in consequence.

CHARACTERISTIC CONDITIONS AND INFLUENCES.

The general process of development in the United States was modified in the South by special influences. The institution of slavery had formed a distinct social system, the dominant class becoming a proud aristocracy. There was ample leisure for self-improvement, and the standard of culture was high. The standard works were widely read, and newspapers were abundant; a few magazines of great intellectual excellence but meager circulation were issued. Scant encouragement was given to those who chose the literary profession; men who were in the front rank of American novelists complained of neglect and lack of financial support. Yet, among the upper classes, education was not backward. There were no common schools, but excellent academies and colleges supplied their place. Little attention was paid to the sciences in the curriculum of these institutions, and technical education was absolutely undeveloped. The whole scheme of training was devised to make orators, who were to move the masses by the charm of the spoken word. The choice of a vocation was confined almost exclusively to the pulpit, the bar, and the forum, and on account of the great interest

in polities the majority of the educated men preferred to expend their energies in political controversies.

The same conditions produced an equally noticeable effect on the material life of the community. There was little in the way of manufacture or trade with other sections. The methods of transportation were extremely primitive, and the conservatism of the people created a serious opposition to the building of railways. Each planter had his own carriages, wagons and carts, and a long trip to market was only a pleasant diversion, time being of slight value. As each plantation was an economic unit, very little was necessary in the way of trade. The commercial transactions were largely conducted by barter, and there was little necessity for ready money. Agriculture was the main pursuit, and its main staples—tobacco, cotton and rice—were confined to this section. Although so much of the life of the community was devoted to agricultural pursuits, the operations of the farm were rarely conducted on business principles, or with any attention to the teachings of science. The planters could afford to take life easily. Their chief duties were to make long visits to relatives and friends, to ride, fish and hunt, and, above all, to discuss the affairs of state.

EDMUND RUFFIN.

It was under such conditions as these that Edmund Ruffin lived. He recognized the difficulties inherent in his times, and was not discouraged by the conservatism against which he labored, being a man of independence and great firmness of purpose.

Edmund Ruffin was born January 5, 1794, on his father's plantation in Prince George county, Va. His father was a gentleman of fortune, a typical planter of the olden time. From his earliest youth Edmund was an intelligent reader of the literature of the day, although his reading was rather for amusement than for instruction. As was the custom, his father decided to give him the education due him as the son of a wealthy Virginia gentleman, and with this end in view sent him at the age of 16 to William and Mary College.

At this time the war of 1812 broke out, and he enlisted in a volunteer company, serving from August, 1812, to February, 1813. He left the army probably on account of his father's death, which must have taken place at about this time, for in the year 1813 we find him placed in the possession of an extensive estate at Coggins Point, in Prince George county, and he states that, although not of legal age, the "easy indulgence of his guardian" gave him the control of this property.

We must sympathize with Mr. Ruffin in the difficulties under which he labored in his early efforts to make a success of agricultural operations on his estate. He had gained no practical knowledge of the field work of agriculture in his youth, and he had

therefore to learn the most rudimentary principles. Yet the farm operations were so simple in his day that he soon mastered their details. In his reading he chose rather the agricultural writings of the time. These were mostly planned to satisfy other conditions, such as existed on the great estates of England, and much of their teaching was inapplicable to the conditions existing in Virginia. But the perusal of these works gave him an insight into the scientific methods used in other countries, which offered a sharp contrast to the slipshod methods in vogue in his own State. He saw that the latter were "wretched in execution and erroneous in system."

EFFORTS TO INCREASE THE FERTILITY OF THE SOIL.

In the same year in which he began his control of the estate there appeared the first book devoted to the discussion of Virginia agriculture. This work, written by Col. John Taylor, a prominent planter of Caroline county, was printed in Georgetown, D. C., in 1813, under the title, "Arator: being a series of Agricultural Essays, Practical and Political * * * by a Citizen of Virginia." It had previously been published as a series of articles in the "Spirit of Seventy-six," in 1809 or 1810. The work at once attained great popularity, and was issued in at least six editions. Colonel Taylor's views may be summarized briefly as follows: The secret of success in agriculture lies in the free use of putrescent vegetable matter as a manure. In the ordinary process of handling such materials as are used for this purpose, much of the valuable fertilizing material is lost, being of a gaseous nature and passing off into the atmosphere during the process of putrefaction. The manures should be, therefore, incorporated with the soil before the processes of decay are started, so that this valuable matter may be saved. Too much land is used for grazing. This land should be used rather for the cultivation of crops, and the crops fed to the cattle at once (the modern soiling system). The manure made by the cattle should be at once plowed under, together with the waste from the fodder. Clovers should be largely grown and plowed under to add fertility to the soil. Gypsum will increase the clover yield. Deep plowing should be the rule.

It was natural that Mr. Ruffin should at once become an admirer of Taylor's system of husbandry. He recognized the fact that the exhaustion of the fertility of the soil was the great difficulty with which he had to contend, and welcomed any system calculated to improve it in this respect; but he at once met with difficulties in the attempt to apply the principles to his own practice. His land was not suited to clover, and he found it impossible to get a crop. The soil was shallow, and the ridge system advocated by Taylor subjected the sidehills to injurious loss from washing. Nor did the land respond to the use of vegetable manures to the extent expected. After six

years spent in the attempt to apply these principles, meeting with nothing but failure, he was compelled to confess that "no part of my poor land was more productive than when my labors commenced, and on much of it a tenfold increase had been made of the previously large space of galled and gullied hillside."

At this time Mr. Ruffin had an opportunity of examining a copy of Sir Humphrey Davy's Lectures on Agricultural Chemistry, and naturally sought for a reason for the lack of effect of "putrescent manures" in his particular region. He found the following passages:

If on washing a sterile soil it is found to contain the salts of iron or any acid matter, it may be ameliorated by the application of quicklime.

A soil of good apparent texture from Lincolnshire was put into my lands by Sir Joseph Banks as remarkable for sterility. On examining it I found that it contained sulphate of iron, and I offered the obvious remedy of top-dressing with lime, which converts the sulphate into a manure. [Ed. 2, London, 1814, p. 203.]

Mr. Ruffin at once saw a parallel between the soil mentioned by Davy and that of his own farm. He tested the soil for the salts of iron, but could not detect a trace of the copperas which he expected to find. In studying over the matter he was attracted by the expression in the first sentence, "if it is found to contain the salts of iron or any acid matter." While he recognized the intention of Davy to refer to the mineral acids only, which he knew by direct testing to be absent from the soil of his farm, he conceived the idea that the sterility might be due to the presence of organic acids in the soil, which acted as a "poison" to the crops. This view was partially confirmed by the character of the vegetation on the worn-out land in question, which consisted largely of sheep sorrel and similar plants known to contain free vegetable acid. He noticed also that those portions of his land did not respond to a test for lime. His more fertile soils, however, were "shelly" in character, and there was no trace of the acid plants growing on them. He could not, however, obtain any evidence of a direct nature that the vegetable acids were present in the sterile soils, nor in his extensive reading could he find a single mention of the occurrence of these substances in any soil. The existence of the vegetable or humus acids was not proved until a much later date.

From these meager indications Mr. Ruffin drew his theory of the action of lime on the soil, and at once proceeded to put his ideas into practice. He found on his own farm extensive beds of shell marl and decided to use this material, which was cheap and easily accessible in unlimited quantities. The existence of these beds had been well recognized, and a large amount had been burnt into lime for structural purposes.

Lime in the form of quicklime, limestone, marl, etc., had been used on the continent of Europe for many centuries. There are several instances of earlier use of marl in America, and in the State of Pennsylvania the use of quicklime had become almost universal. In none of these instances, however, had lime or marl been used with a definite object in view, with any other purpose than the general improvement of the land; nor had any experiments been made except in the application of the lime and a guess or inaccurate statement of the increase in yield.

EXPERIMENTS IN THE USE OF MARL.

Mr. Ruffin began his experiments with marl in February, 1818, excavating a large amount of the mineral and applying it to a portion of a tract of land which had just been cleared of forest growth. The application was made at the rate of 150 to 200 bushels to the acre. From the land thus treated he obtained an increase of 40 per cent. over the crop on similar land untreated. Encouraged by this result, he planned more extensive experiments for future years. Without entering into the details of these trials, the result may be stated as overwhelmingly in favor of the use of marl; in some instances the crop from the marled fields was more than twice as great as from the same fields before marling.

It is not to be understood that Mr. Ruffin advocated the use of marl alone with the expectation of thus building up the fertility of the soil. His object was rather to bring the soil into such condition as would make it respond to an application of organic manures which had been previously found to be of little value when used on the land in its ordinary condition. He retained as much of the teachings of Taylor as placed great stress on the value of vegetable manures, and used every effort to add as much organic matter as possible to the soil on his farm.

The experiments were continued for a long series of years, accurate records being kept of the history of each plat of ground, frequent comparisons being made between the measured yields of marled and unmarled fields. Marl was tried with and without manure, and manure was tried with and without marl. The greater the number of experiments and the more numerous the results obtained the greater proof was given that the use of marl was of great advantage. The careful manner in which the experiments were carried on shows him to rank as one of the most intelligent experimenters of his time. The investigations were not confined to mere field trials. The soil of his plantation was analyzed, the marls used were analyzed, and the results were carefully studied. He searched the literature of every age for mention of the occurrence of marl and the history of its application to the purposes of agriculture. He was familiar with foreign publications on the subject, not only reading thoroughly, but studying, comparing, and making extracts as he found matter worthy of future

reexamination. He collected information as to the character and extent of deposits of calcareous substances in his native State, and devoted much time to a study of the best and most economical methods for its exploitation. He figured carefully the cost of applying the marl, and estimated the financial returns from its use. Every line of inquiry which could possibly add to his general stock of information was carefully followed to the very end.

HOW MARL INCREASES FERTILITY OF SOIL.

His reasons for the use of marl, gained from his experience and study, were two in number. He believed that the addition of marl corrected the natural acidity of the soil, and that it assisted in the preservation of organic manures from loss of the gaseous products of decomposition while hastening the decomposition itself. He foreshadowed to a great degree the discoveries of later years with reference to the action of soil bacteria; for, as is now well known certain of the nitrifying organisms in the soil are capable of action only in neutral or alkaline soils, and thrive best in the presence of a small amount of alkali. The sterility of many of the soils in eastern Virginia was probably due to conditions present which are unfavorable to the growth of the nitrifying organisms, owing to the presence of organic acids in the soil. The richest soils in the world contain large quantities of organic matter, and probably some proportion of the humic (organic) acids; but they also contain sufficient lime to unite with these acids, and thus neutralize them to a large extent.

The marls first used by Mr. Ruffin were valuable only from their content of lime, no phosphoric acid or potash being present; but later, and especially after his removal to his estate at Marlbourne, in Hanover county, he used greensand, called by him "gypseous earth," which contained certain amounts of potash, and probably also contained phosphoric acid. He does not seem to have recognized the value of these ingredients, basing his opinion of the value of these marls on the carbonate of lime contained. We can hardly overlook this mistake, although it was excusable at a time when the knowledge of agricultural chemistry was extremely limited.

The first published article from Mr. Ruffin's pen was "An essay on calcareous manures," in the American Farmer, Vol. III. p. 313 (the number for December 28, 1821). This essay had been prepared and read before a meeting of the Prince George Agricultural Society, of which Ruffin was a member. The essay was afterwards published in book form, reaching its fifth edition in 1852. From a short article of 7 pages it expanded to a book of 493 pages. It is probably the most thorough piece of work on a special agricultural subject ever published in English. The treatment of the subject is historical, scientific

and practical, exhausting every source of information available. From the first publication, this essay attracted great attention, and is even now the best authority on certain phases of the subject. As a result of this and other publications by the same author, a large proportion of the farm owners in the tide-water district of Virginia were led to use marl, and, what is more important, were aroused by his example to a sense of the importance of personal attention to the needs of their estates and to details of management. At the time of the publication of the fifth edition of the essay, the effect of his teachings was so plainly evident that attention was called to the matter by the governor of the State in his annual message to the legislature in the following words:

The increased value of the lands lying in the tide-water district, as exhibited by the returns of the recent assessment, vindicates the science (of agriculture), and appeals strongly to you for aid and encouragement in its behalf. In 1819 the lands in this district were valued in the aggregate at the sum of \$71,496,997, and in 1838 at \$60,704,053.20, exhibiting a decrease in value during the nineteen years that intervened to the enormous amount of \$10,792,943.80. And yet these same lands were recently assessed at the sum of \$77,964,574.52, showing an increase in their value during the last twelve years of \$17,260,521.32.

This remarkable and gratifying change in the value of these lands cannot be attributed to any extent to benefits resulting from the works of internal improvement, for thus far these improvements have been chiefly confined to other sections of the State. And in vain do we look for a solution of this problem, unless we remember that for several years past the enterprising citizens of this section of the State have been devoting themselves to the subject of agricultural improvement; and by the proper application of compost, marl, and other manures, and the use of other means which a knowledge of this branch of education has placed at their command, they have redeemed, and made productive and valuable, lands heretofore worn out by an improper mode of cultivation, and consequently abandoned by the farmer as worthless and unfit for agricultural purposes.

FARMERS' REGISTER.

Early in the year 1833 Mr. Ruffin issued, as editor and proprietor, the first number of the Farmers' Register, a monthly agricultural magazine of 64 pages of reading matter. In the editorial column of the first number, after calling attention to the low state of agriculture in Virginia, and discussing the reasons for the same, he announces that the journal is started to serve as a medium of exchange between the farmers of the State, and that this shall be the chief feature. The Farmers' Register was published for

ten years, the second volume being printed on the estate of Mr. Ruffin at Shellbanks; the subscription price was \$5. The influence of this journal on the agriculture of the State was very great, the tone was high, and the articles were carefully written, or selected from the better class of agricultural publications. Nearly half of the reading matter came from Mr. Ruffin's pen, and the subjects on which he expressed himself were extremely diverse in character.

Although much of the matter published in the Farmers' Register had a direct bearing on the marl question, nearly every issue containing something on the editor's favorite hobby, yet it was not by any means the only subject discussed. Every conceivable question in which the farmers of the State might be interested, or which could affect their welfare in the least, was carefully treated. Much attention was given to the development of roads and railways in the State. Much was written on the slavery question. Agricultural education was discussed at length. But the operations of a practical character, the field work of the farmer, received the greatest attention.

The difficulties attending the publication of such a paper at this period were at best discouraging. Mr. Ruffin complains with reason of the delay in the delivery of his paper, which in one instance required fourteen days to reach a subscriber at a distance of 180 miles. The first volume was printed on poor paper, although it is now in far better condition than can be hoped for a copy of the ordinary agricultural paper of to-day at the end of a similar period. He attempted, as has already been stated, to print the paper on his estate in Hanover county, but probably found the task too great, as the third and subsequent volumes were printed at Petersburg.

As appendixes to the Farmers' Register were printed the seventh edition of Arator, in 1840, the Westover Manuscripts, in 1841-42, and the third edition of the Essay on Calcareous Manures, in 1842. This was done to insure the wide distribution of these works, and incidentally to save cost of transmission.

PUBLIC SERVICES OF MR. RUFFIN.

At the meeting of the legislature of the State in 1841, a State board of agriculture was organized and Mr. Ruffin was elected a member; in December of that year he was elected secretary and held that position for a year. In 1842, the State of South Carolina having made an appropriation for an agricultural surveyor, Mr. Ruffin accepted the position and published, in the following year, his first report, being mostly a statement of the occurrence of beds of marl in the State and a plea for the drainage and reclamation of the swamp lands. On his return to Virginia he was instrumental in founding the Virginia State Agricultural Society and was elected the first president. He advocated, with others, the establishment of a State commissioner of agriculture, with

a good salary, and the right to employ certain scientific assistants, but the plan did not meet with the approval of the legislature. At various periods during his life he was connected with local agricultural societies, and by his earnestness and enthusiasm aroused much interest in co-operative work.

Mr. Ruffin was an enthusiastic advocate of higher education, suggesting the establishment of an agricultural college supported by the State. In the main, the details of his plan were such as are in operation in the agricultural colleges of the present, except that the students might pay all their expenses by work in the experimental fields connected with the college. The experience of past years has shown this to be impossible. An essay on the subject of agricultural education, published at Richmond in 1853, won a prize offered by the State Agricultural Society.

As was usual with the prominent men of Virginia, Mr. Ruffin took great interest in the political affairs of his native State. In 1824 he was elected to the Senate of Virginia, and served three years. In 1841 he published *Observations on the Abuses of the Banking System*, and in the following year at least six numbers of a periodical publication under the name *Bank Reformer*. These works were called forth by the financial agitation of the time.

In 1855 a collection of the more important agricultural writings of Mr. Ruffin, previously published in various periodicals, were gathered together in *Essays and Notes on Agriculture*. This included an essay on drainage, a prize essay on the Southern cowpea, a discussion of remedies for malaria, and articles on the culture and uses of clover, method of harvesting wheat, the moth weevil, prairies, deserts, peat bogs, usefulness of snakes. This list illustrates the versatility of the man, but can give no idea of the real value of each article or the concise and easy style of the author.

The good resulting from the agricultural teachings of this man would to-day be more evident had not the war left the State of Virginia in a very depressed condition. The use of marl, once so common, has been displaced to a large extent by commercial fertilizers. The cheap slave labor made it possible to obtain marl at slight cost; it does not now pay to carry it to any distance. Most of the men whose energies were spurred to new effort by his ready pen have passed away; but among the intelligent farmers of the State he is still remembered, and his teachings are often followed by those who have never heard his name nor read what he has written.

Edmund Ruffin conducted his experiments with such attention to details and with such a truly scientific method of preparation and planning that we may look on his work as some of the best done in the country. He certainly was ahead of the investigators of the day. He proved by experimentation not only

that the practice of the farmer is often ahead of the proof of the theorist, but that the work of the theorist is often of great practical benefit to the farmer.

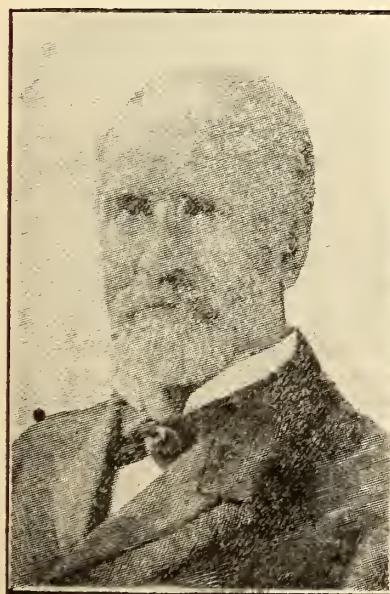
HON. JAMES WILSON.

In the forefront of those who in recent years have done and are doing so much to help the farmers of the country we place the Hon. James Wilson, the present Secretary of Agriculture. We give him this prominence not so much because of his position as the political head of the Department of Agriculture, but because of his work as a scientific and practical farmer and the great ability he has displayed in enlarging the scope of the work of his department, and the making of it the most successful and useful Agricultural Department possessed by any nation in the world. He found it a political department, he has made it a truly agricultural one, and there is not a farmer in the country, be he Republican or Democrat, who has not benefitted enormously by Mr. Wilson's conception of what a National Department of Agriculture should be, and his efforts to realize this. As an evidence of what the department is now doing to bring the results of the work of its experts before the farmers Mr. Wilson states in his report for presentation to Congress at the present session that the total number of copies of all publications issued by the department during the past year aggregated not far from 12,000,000, and that of this total nearly 7,000,000 were "Farmers Bulletins" which is practically one copy for every farmer in the country.

Mr. Wilson was born in Ayrshire, Scotland, 16th August, 1835, of Scotch parents. At the age of seventeen years, he came to this country with his parents, living three years in Connecticut. With his family he then moved to Tama county, Iowa, his present home, where, in 1861, he engaged in farming on his own account, and where he still owns and runs a most successful farm. Mr. Wilson has been a close student of scientific methods of agriculture, and his management of a farm of 1,200 acres showed marked capacity for his pres-

ent duties as Secretary of Agriculture. After serving in the Iowa Legislature for three years, Mr. Wilson was elected to Congress in 1872, and served three terms—being a member of the Agricultural Committee and largely instrumental in having the Department of Agriculture made an executive department. After leaving Congress, Mr. Wilson devoted himself to the management of his farm until 1893, when he was elected Professor of Agriculture in the Iowa State Agricultural College, and Director of the Experiment Station there. He was filling this position when selected and appointed Secretary of Agriculture. Mr. Wilson is one of those who have faith in farming as a business, and he proves his faith by his work and by the fact that he has trained and made his sons into farmers, in which calling they are making the like success their father made.

Foremost amongst the instrumentalities which have been provided by the nation and the States for the teaching and adapting science to the advancement of agriculture are the Agricultural and Mechanical Colleges and Experiment Stations. Previous to the foundation of these colleges under the direction and with the aid of grants of land made by Congress, there were no institutions of learning whose primary duty it was to teach science and its application to the everyday work of the farmer and the mechanic. The lawyers, the parsons and the doctors had full provision made for their education, but farmers and mechanics had no places of higher instruction than the common schools of the country. The organization of the work of these new colleges called for men of a special type of character and of a class difficult to be obtained, since there had been no place heretofore for the training of such men. As a consequence of this many mistakes were made at the outset and the new colleges in too many cases resolved themselves into merely literary institutions and altogether failed of the object for which they were intended. This was the case with the Virginia College at Blacksburg amongst others. Not until it came under the direction and management of Dr. J. M. McBryde, the present President, did it begin to fulfill the purpose for which it was created, and even yet it only partially does this from lack of suitable buildings and apparatus for the teaching and solution of agricultural problems, which it is the duty of the State to supply. Its mechanical department is, however, fully equipped and has for several years done most excellent work and turned out a large number of graduates, many of whom are filling the highest positions in the engineering and mechanical establishments of this and other countries. Under Dr. McBryde's man-



Hon. James Wilson, Secretary of Agriculture.

agement and close supervision, the college has grown in popularity every year, and where there were only 75 students when he took charge there are now nearly 750 in attendance. If now the State will only provide the necessary buildings and apparatus for as fully equipping the agricultural and horticultural side of the college as it has done for the mechanical side, we do not doubt but that ere long the college will have as many agricultural students as mechanical ones. There has been for several years a constant increase in the number of students taking the agricultural and horticultural courses. The Agricultural Experiment Station is located at the college, and of this Dr. McBryde is the director. The location of this station is unfortunate so far as its utility to the great bulk of the farmers of the State is concerned. Situate on the top or near the highest level of the Blue Ridge mountains, it is practically precluded from doing any work outside that of experiments with live stock and some orchard and small fruit work. Under Dr. McBryde's supervision a fine barn for conducting experiments with cattle has recently been erected and a herd of stock purchased, and we look to see some good work done. Climatic and soil conditions will always preclude any work being done there which would result in helping the tobacco growers and truckers of the State.

DR. J. M. McBRYDE.

President of the Virginia Polytechnic Institute, State Agricultural and Mechanical College, and Director of the Va. Experiment Station.

John McLaren McBryde was born in Abbeville, S. C., of Scotch parentage, in the "forties" and was educated at the South Carolina College and the University of Virginia. He served in the Confederate States army and at the close of the war went to farming for several years in order to recuperate his health, which had been undermined by coast fever. During this time he made a special study of botany and agricultural chemistry. In 1879 he accepted the Professorship of Agriculture in the University of Tennessee and whilst holding this office organized agricultural experiment work, which attracted attention at home and abroad. In June, 1882, he resigned his Professorship at Knoxville to accept the Professorship of Agriculture in his old *Alma Mater*, the South Carolina College, notwithstanding many tempting offers made him to stay at Knoxville. In September, 1882, he was made chairman of the Faculty of his old college and in the spring of 1883 was elected President of the college. In 1886 he was offered by the State Board of Agriculture the directorship of the two Experiment Stations established by the State

and accepted at the request of the Board of Trustees of the college. In 1887 he was elected President of the University of Tennessee at a salary of \$5,000, with a free hand to reorganize the University. After consideration he declined the offer. In 1888 he was made President of the reorganized University of South Carolina and director of all the Experiment Stations, State and National, in the State. In May, 1891, he was offered and accepted the Presidency of the Virginia Agricultural and Mechanical College at Blacksburg, and director of the State Experiment Station. He took up the work there in July and submitted a scheme of complete

reorganization which was approved by the board. The policy he formulated was based on the building up of a good and strictly technical school and this policy has been strictly adhered to. At the time when he took charge the total number of students in attendance the first session was 116, but there were never more than 75 in actual attendance at any given time. The enrollment of students at the college is now over 700 and will reach 725 this session, thus fully demonstrating the success of the plans he laid down and his popularity as President of the college. The attendance would be still larger if there was accommodation for more students, and the State is urgently being pressed to provide this and thus meet the demands of the people for a strictly technical training of the youth of the State. Under the terms of the new constitution of the State of Virginia the President of the college is made a member of the State Board of Agriculture, and Dr. McBryde is now working with the Board to make it more responsive to the requirements of the State, and of more service to the farmers than it has been in the past. Dr. McBryde is a Ph. D. and LL. D., and member of many learned and scientific societies, and his name has been prominently mentioned for the Presidency of the University of Virginia. His reports on experiment work conducted by him in Tennessee and South Carolina are regarded as excellent work and especially the report on cotton culture experiments, which is probably the most complete and reliable of anything done in this line, and is looked upon as the authority on this subject.



W. A. HENRY.

Amongst intelligent breeders and feeders of live stock of all kinds throughout this country, and it may almost with truth be said throughout the world, there is no man whose name and work is better known than that of W. A. Henry, of the University of Wisconsin. His work on "Feeds and feeding" is the authority on this subject in every agricultural college and experiment station, whilst his constant contributions to the leading agricultural journals, and especially to those making live stock a specialty, are helping farmers, breeders and feeders every day in the year and placing them under constant obligations to him.

Prof. W. A. Henry was born in Ohio in 1850. His early life was spent on a pioneer farm in the north-western part of the State. Through money earned by teaching school he studied at the Ohio Wesleyan University, after which he taught in high schools in Indiana and Colorado. He was graduated from Cornell University in 1880 in the agricultural course, having received training under such noted teachers as Roberts, Caldwell, Prentice, Comstock, and others. For a

time he was with Prof. Riley, of the United States Entomological Commission, Washington, and in the fall of 1880 he became professor of botany and agriculture in the University of Wisconsin. Seeing great possibilities in the agricultural field, Prof. Henry soon relinquished botany for the broader field of agriculture. In 1887 he was elected director of the Experiment Station, and in 1891 was made Dean of the College of Agriculture, which title he now holds.

Professor Henry has more than a dozen professors and instructors associated with him in his work, including Professors Babcock, Russell, Farrington, Woll, Whitson, Sandsten, Humphrey, etc.

Under Henry's direction the Wisconsin College of Agriculture was the first to inaugurate a short course in agriculture, which became popular as soon as it was well known by the farmers. The enrollment for the present term, beginning November 30th, is over three hundred. The calls for students from this department by farmers, gardeners and others are be-

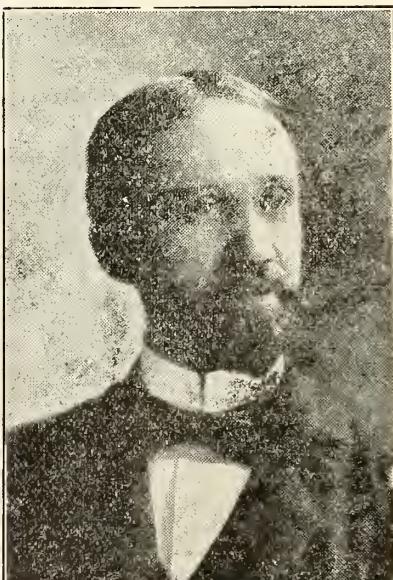
yond the ability of the school to supply. Professor Henry also inaugurated the first dairy school in America, and it was from the Experiment Station under his charge that the Babcock Milk Test and the Wisconsin Curd Test were given to the dairy world. There are one hundred and forty-two students all the time in attendance on this course at the present time. Fifty-seven students are enrolled in the long course in agriculture, and the total attendance in the college is over five hundred.

Professor Henry's chosen branch is the feeding and nutrition of farm animals. A summary of his work and studies in this direction appears in a volume entitled "Feeds and Feeding," published by himself in March, 1898. "Feeds and Feeding" is a generous volume of nearly 700 pages, embodying the results of live stock investigations in both the old and the new world. It has been adopted as a text-book by practically all the agricultural colleges of the country and is rapidly finding its way into the libraries of the intelligent stockmen of all America. The fifth edition of the book has been issued.

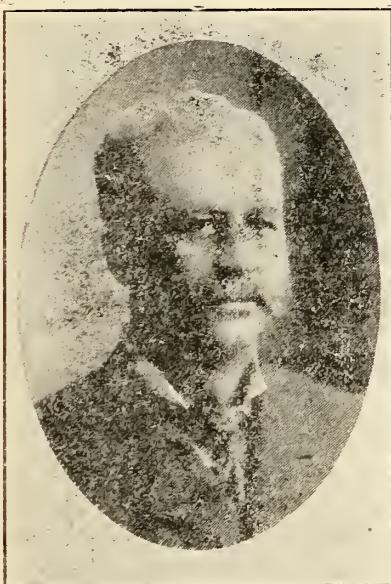
PROFESSOR B. W. KILGORE.

One of the best known men in the Old North State is Professor Kilgore, who for 12 years has been closely identified with the work of the State Board of Agriculture, the Agricultural and Mechanical College and the Experiment Station.

Prof. Kilgore was born in Mississippi thirty-six years ago received his education in the common schools, the Agricultural and Mechanical College of Mississippi and Johns Hopkins University. He has been engaged in teaching and agricultural experimental work since 1888 twelve years of it having been spent in North Carolina, the first eight years as assistant chemist to the Experiment Station



and the last four as State Chemist and Director of the Experiment Station. His main work has been along the lines of determining the digestibility and feeding value of Southern stock feeds, the fertilizer combinations best suited to our various agricultural and truck crops, culture methods, rotations and the growth of soil-improving crops adapted to the different soils



and sections of the State. Considerable time and attention has been given in an experimental way to determining the best varieties of cotton, corn, grain, and other farm crops and to their improvement by careful, judicious selection. The chemical side of the inspection work of the State, which is under the Department of Agriculture, relating to commercial fertilizers, stock feeds and human foods, is also under his charge.

PROFESSOR C. W. BURKETT.

Amongst the newer acquisitions to the ranks of those who in the South are engaged in the work of arousing the interest of farmers in better methods of farming and endeavoring to prevent the exodus of farmers' sons from the farms to the cities, Professor Burkett, of the North Carolina College of Agriculture, stands prominent. He is an enthusiast on the subject of agricultural education for farmers' sons and although he has only been at the college for about two years has already so stirred up the farmers that they have sent their sons to the college in such increased numbers as to necessitate the provision of a new \$50,000 building to meet the needs of the case. This is a record of which Prof. Burkett may be proud, and we look to see a great development of better methods of farming in the Old North State when these young men shall have been taught the "whys and wherefores" of scientific agriculture. Professor Burkett is the joint author of a book on Agriculture for Beginners, which we hope to see become a textbook in all the common schools.

Prof. Charles. Wm. Burkett was born at Thornville, Ohio, January 3, 1873, and was educated in the public schools and at the Ohio State University.

He was asasistant in agriculture and superintendent of the farm at the Ohio State University from 1895 to 1898, and agricultural editor of the Ohio State Journal 1895 to 1898.

He was the appointed Professor of Agriculture in the New Hampshire State College from 1898 to 1901, and agriculturist at the New Hampshire Experiment Station 1898 to 1901, and editor of the Agricultural Students Magazine 1894 to 1898.

He received the appointment of Professor of Agriculture and Agriculturist at the North Carolina Agricultural College in 1901 and still fills that position.

He has been a Farmers Institute lecturer in Ohio, New Hampshire, Massachusetts, Maine, Vermont and North Carolina.

He is the author of several Experiment Station Bulletins; a History of Ohio Agriculture; Feeding

Farm Animals, and joint author of Agriculture for Beginners.

He has been active in popularising agricultural education wherever located and in getting same started in colleges with which he has been connected.

In New Hampshire he secured an appropriation of forty thousand dollars for an agricultural building which has just been completed. This building was called for by the increase in agricultural students from 2 to 65 during the three years he was with the New Hampshire College.

In North Carolina the same experience has been repeated. A \$50,000 agricultural building has been provided and the number of agricultural students has increased from 17 to 132 in three years.

He believes firmly in the doctrine that agricultural education will succeed in any institution if the teacher himself believes in it. Energy and enthusiasm in a teacher of agriculture is absolutely necessary.

Professor Burkett's motto is "everlastingly at it." He loves the boys, and ever shows his interest and faith in them and his belief in agriculture.

Under these environments enthusiasm for agricultural education becomes contagious and no force can keep it in the background.

PROF. A. M. SOULE.

Within the past seven years there has sprung up in the South an interest in live stock husbandry and general forming as distinguished from merely planting. This is a development much needed, and will greatly tend to the advancement of the prosperity of the South and the greater fertility of our lands. Much of this aroused interest in stock is to be attributed to the fact that at several of the Agricultural Colleges and Experiment Stations gentlemen have been appointed as professors who came from the North and West, where farming without live stock in the shape of cattle, sheep and hogs, would be an impossibility. These gentlemen have been able to satisfy Southern farmers that the addition of cattle, sheep and hogs to the live stock of the farm would enable them to turn to profitable uses many of the



wasted products of the plantation, and would at the same time enhance the fertility of the place and make certain the production of the staple crops of the South at less cost for fertilizers. Amongst these gentlemen, Prof. Soule, now Director of the Tennessee Experiment Station, has borne a leading part. By his work at the Missouri Experiment Station, at the Texas Agricultural College, and since his appointment to the Tennessee Station, he has opened the eyes of thousands of farmers throughout the South to the possibilities of what can be done by live stock. He keeps the interest aroused and attention centred on the subject by using the agricultural press largely for the dissemination of his information, a practice which might be followed with great advantage by all Experiment Station workers. Thousands of farmers will read an article in their own agricultural paper who will not take the trouble to read an Experiment Station bulletin, or a book on the subject.

Prof. Andrew M. Soule, Chairman of the Agricultural Department of the University of Tennessee, and Director and Agriculturist of the Tennessee Experiment

Station, was born near Hamilton, Ontario, Canada, in 1872. When he was about ten years old the family moved to Niagara Falls South, Ontario, where they have since resided, and there he received his early public school training. He attended the high school at that place, where he prepared for his university work. Mr. Soule was brought up on one of the best stock and fruit farms in the

Niagara peninsula, and from his earliest childhood had a great love for nature and for the pursuit of agricultural industries. This led to his early determination to make his future life work one of study and experiment in this interesting and attractive field of investigation.

In 1890 he entered the Ontario Agricultural College, situated at Guelph, and two years later secured an associate diploma from that institution. He won the silver medal for general proficiency in his class, and was also first prize essayist in stock husbandry. Following up the good work already begun, he graduated from the University of Toronto in 1893 with

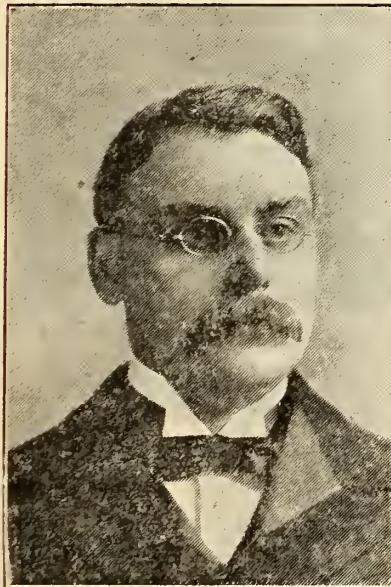
the degree of Bachelor of Science in Agriculture. After graduation he returned to his father's farm and studied the practical application of science to agriculture.

In the spring of 1894 he was called to the Missouri Experiment Station as assistant to the director, and was placed in charge of the live stock and dairy interests of the station at that place. During his connection with that station he published a valuable treatise on "Dairy Management," based on the results of a series of experiments made while there.

In the fall of 1894 he was chosen Assistant Professor of Agriculture and Assistant Agriculturist in the Texas College of Agriculture and Experiment Station. This position he held for two years, and during that time published a comprehensive work on "The Effect of Food on Economic Dairy Production." In 1896, owing to the increase in the number of students in agriculture, Prof. Soule's work was divided, and his whole attention was devoted to agricultural instruction. In this he was very successful, and the department rapidly developed, especially those features relative to animal husbandry and dairying.

In the spring of 1899, Prof. Soule was called to occupy his present position in connection with the University of Tennessee. During his tenure of office there several valuable reports have been issued from his department, including the following bulletins: Experiments with Winter Wheat; Corn, Forage Crops and Spring Cereals; Feeding Native Steers, Parts I. and II.; Winter Cereals and Legumes; Winter Wheat; The Value of Corn, Skim Milk and Whey for Fattening Swine; The Relative Value of Protein in Cotton Seed Meal, Cow Pea Hay and Wheat Bran; Influence of Climate and Soil on the Composition and Milling Qualities of Wheat; a Farmers' Bulletin on The Conformation of Beef and Dairy Cattle; and several agricultural year books. He has written many articles on education, and has reorganized the Department of Agriculture, adding very materially to its equipment and strengthening and adapting the courses to the peculiar needs of the South. Under the present vigorous policy the Tennessee Experiment Station is finding favor with the people of the State, and of the whole country. As an evidence of this it is carrying on extensive co-operative work with the Bureau of Plant Industry, U. S. Department of Agriculture. Prof. Soule says agricultural education offers the greatest opportunity

to the young men of the country at the present time, and that the proper way to bring the station and the college of agriculture in touch with its constituents is through personal effort. In this he has been eminently successful. He is devoted to stock husbandry, and is doing everything in his power to build up the industry on a scale commensurate with the needs of



the South. In spite of several flattering offers to go to other States he has remained in Tennessee, believing that he can accomplish more for the promotion of agricultural and stock industries there than in many other sections of the country.

Prof. Soule has been a frequent contributor to the agricultural press of the country and his articles have been both interesting and instructive. He has achieved notable success as an institute worker and is frequently called on to address farmers' clubs and stock breeders' associations. He is at present secretary of the East Tennessee Farmers' Convention, one of the oldest and most influential organizations in the country and it is largely through his efforts that it has achieved a national reputation. His sincerity, enthusiasm and strong conviction concerning the value of agricultural education are bearing fruit, and through his efforts a short course in agriculture and the opening of the first dairy school in the South have been accomplished.

MAJOR HENRY E. ALVORD.

In a foremost place amongst those who have popularized the specific dairy cow and made of dairying a science and a profitable line of farm work, stands Major H. E. Alvord, the present chief of the Dairy Division of the Bureau of Animal Industry, of the Department of Agriculture. Virginia, claims Maj. Alvord as a citizen, he having been resident in Fairfax county for more than thirty years, and he has demonstrated there that dairying can be made as profitable in the South as in any other part of the country. Major Alvord was, when a young man, in the United States army, but quit the sword for the plow when he became a resident in this State. His work as chief of the Dairy Division of the Bureau of Animal Industry has been largely that of developing the dairy industry of the country and the opening up of foreign markets for our butter and cheese, and in this work he has done good service.

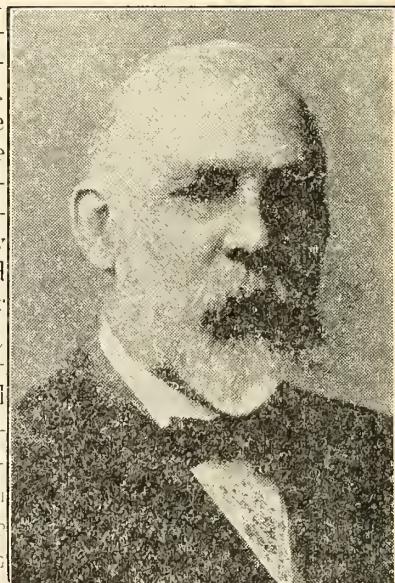
During the ten years that Major Alvord was a cavalryman, he was stationed for some time in the West and was noted for the excellence of the company and post gardens made under his direction. At the same time he made a study of the great cattle growing interests just then assuming prominence on "the plains." When the business was at its beginning, he wrote an exhaustive article upon "American beef for British markets," which was awarded the grand medal of the Royal Agricultural Society of England. These early tastes and experiences were developed during Major Alvord's term as Military Professor at the Massachusetts Agricultural College and he took a full course of lectures under Stockbridge, Goessmann, Law, Clark, Flint, Wilder and others. He then left the army and settled at the home of his wife,

Spring Hill Farm, in Fairfax county, Va., near the Great Falls of the Potomac. He added considerably to the area of the place, established there one of the first herds of registered Jersey cattle in the State and conducted a dairy farm. He has regarded "Spring Hill" as his home for more than thirty years, but most of the time has been engaged in other States in the work of agricultural research and instruction. Before the United States founded the "Hatch Stations" he was general manager of Houghton Farm in Orange county, New York, which was a private experiment farm, where \$30,000 or \$40,000 a year was expended in agricultural investigations, dairy questions receiving particular attention.

Subsequently, Major Alvord was connected with several colleges and stations, teaching agriculture and directing experiment work. He was elected the first Director of the Agricultural Experiment Station of Cornell University (1887) but preferred to accept a similar offer in Maryland where he re-organized the Agricultural College and established the Experiment Station. Upon the creation of the Dairy Division in the United States Department of Agriculture, in 1895, Major Alvord was appointed its chief and still holds that position. He has resumed his residence in Fairfax county.

He has made animal industry and dairying his agricultural specialties. After the Philadelphia Centennial Exposition (in 1876) had attracted attention to the development of creameries in Iowa and the neighboring States, he became an active advocate of the co-operative system of dairying throughout New England, started the first creamery East of the Hudson river and assisted in the establishment of many, particularly in Maine, Massachusetts and Vermont. He regards this as his most useful constructive agricultural work, although he was prominently identified with the organization of the experiment stations under the Hatch act, and with the movement which resulted in the Morrill act of 1890, for the further endowment of the agricultural colleges.

He has been a frequent contributor to agricultural journals and a speaker at conventions, institutes and agricultural meetings of all kinds. He has also been an active member and officer of numerous organiza-



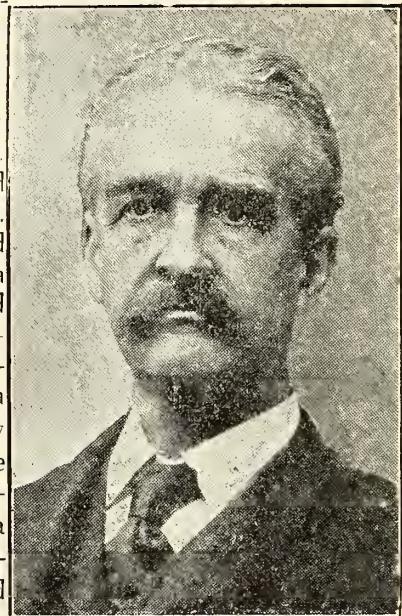
tions connected with his chosen line of work,—president of the Society for Promotion of Agricultural Science, the Association of American Agricultural Colleges and Experiment Stations, the National Catté Growers' Association; director of the International Dairy Fair Association, the American Agricultural Association, the New York State Agricultural Society, the American Jersey Cattle Club, etc. He had charge of the Collective Agricultural College Exhibit at the Columbian Exposition at Chicago (1893) and of the exhibit of the Animal Industries and Products of the United States at the Universal Exposition at Paris in 1900. He was vice-president for the United States of the International Agricultural Congress of 1900 at Paris, and is now a member of the organization commission for the International Dairy Congress of 1905, and the next International Agricultural Congress. His public services have been recognized abroad by making him an honorary member of the Royal Agricultural Society of England and the British Dairy Farmers' Association, and an "Officier" of the National Order of *Merite Agricole* of France.

PROFESSOR W. F. MASSEY.

The men whom we have already named as teachers and writers on agricultural subjects of recognized ability are all or nearly all of them engaged in either the National or State Institutions for the promotion of agricultural research and have done their best work in connection with the institutions with which they are or have been associated. The gentleman whom we now introduce, whilst also an officer of a National Experiment Station and for many years a teacher in an agricultural college, has done his best work through the agricultural press, and through a book written and published by him with the title "Crop Growing and Crop Feeding," and mainly through these mediums has made for himself a reputation and name known everywhere throughout the South. Whilst the other gentlemen whom we have named have been teaching the young men of the land this gentleman, Professor Massey, has been teaching the farmers actually engaged in the business of farming. Whilst the others have been teaching their hundreds of pupils this gentleman has been teaching thousands of men every week for years. In the doing of this great work he has brought to the task both theory and practice, and hence he has spoken with weight and authority which has carried conviction to the minds of his hearers, and it is not saying too much to assert that by his labors he has done more to advance good farming throughout the South than any other teacher or writer in the last 25 years. He has been practically holding a Farmers' Institute all that

time through the columns of the leading agricultural journals of the South Atlantic States and in the tier of States lying to the west of here. His name is a household word in the homes of thousands of the farmers of these States. His long continued labors have borne abundant fruit as evidenced on thousands of farms where the cowpea is now a staple crop and doing a marvellous work in the recuperation of the wasted lands of the South. The debt of gratitude owing by the farmers of the South to Mr. Massey can never be paid, but we know that he feels abundantly rewarded in the contemplation of the increased prosperity which he has brought to this Southland.

Professor W. F. Massey was born September 30, 1839, at Onancock, Va. Educated at Washington College, Md., and Dickinson College, Pa. Went West some years before the civil war and was engaged in railroad surveying from Minnesota to Texas. Started a nursery business in Virginia the year before the war and the war finished it. After the war went to Maryland and took charge of a large nursery and canning establishment in Kent county. Then started a florist and nursery business in the same county on his own account, which for a time was very successful. Transferred the business to the vicinity of Baltimore at an unfortunate time when matters were very dull from the effects of the financial crisis of 1873, and owing to losses in trying to help others was compelled to close out the business. Then took charge of the agricultural interests of the Ridgely estate near Baltimore for over six years. Then made a contract with the proprietor of the Hygeia Hotel at Old Point Comfort to produce everything needed for the hotel in the way of vegetables, poultry, pork, milk and flowers. This contract was eminently successful, was brought to a sudden close by the death of Phoebus, and the impracticability of making a same contract with his heirs. During all thee, which he had been engaged in general farming in one of with garden work. Just at the time when found impracticable to make any further



ment of a satisfactory nature at Old Point, the trustees of the Miller School of Albemarle county, Va., wrote and asked him to take charge of their agricultural interests and to inaugurate an agricultural department in the school. He accepted the offer and worked there for four years. During the third year the trustees of the Virginia College of Agriculture at Blacksburg offered him the Chair of Agriculture, which he declined, as he did not then care to move. The following summer the executive committee, consisting of Hon. Hoge Tyler, Dr. Buchanan and Capt. C. E. Vawter, unanimously renewed the offer of the Chair of Agriculture at Blacksburg. At the same time he was in correspondence with the Board of Trustees of the North Carolina College, and declined to give either an answer until he had visited Blacksburg. He found there that there was a fight on hand between the director and the president and that there was a prospect of a break up, which did actually occur, and not wishing to get into a turmoil declined again to go to Blacksburg, and wrote to the North Carolina College that he would come there.

After occupying the Chair of Horticulture and Botany, and Horticulturist of the station for 12 years he dropped the college chair in order to have more time for the station work and to be foot loose for institute work at any time. In 1901 he became editor of the *Practical Farmer*, of Philadelphia, for which paper he had been for years contributing regularly. Has been engaged in agricultural journalism more or less for thirty years and has devoted all his energy to the upbuilding of the agriculture of the South.

MR. T. B. TERRY.

The gentleman whom we now introduce to our readers, Mr. T. B. Terry, has never been engaged in the work of any of the agricultural institutions of learning or research, but has nevertheless made for himself almost a national reputation as a sound teacher of good farming. Like Prof. Massey, he has done his work mainly through the agricultural press of the country, supplemented by a book, "Our Farming," which has had a great circulation and a profound influence upon the daily work of thousands of farmers throughout the Eastern States. He still continues his labors through the columns of the *Practical Farmer* and at Farmers' Institutes.

Mr. T. B. Terry was born in New York State in 1832. He got his education at Western Reserve College during his father was a clergyman. The son's first at the for himself was buying butter and cheese for a full cream firm, they furnishing the capital. After a full year, it so happened that he traded some town property left a badly run-down farm. This was done with the intention of selling the farm, as he supposed he

could. But he soon found he could not sell, or rent the land to any reliable party, it was so poor. So it seemed best to move onto the farm while he was trying to fix it up a little. This is some 33 years ago. He is there yet. He went onto the farm in debt badly. The land was producing but very little, say 6 or 8 bushels of wheat per acre, one-fourth to one-half of a ton of hay per acre and other crops in proportion. Mr. Terry had no money. He and his family almost starved for a time. But little by little he began to get his bearings and think and study, as he had been trained to do in college. The result was that within a dozen years he was raising an average of 35 bushels of wheat per acre, and 4 or 5 tons of hay in a season, in two cuttings. Instead of almost starving they were laying up about \$1,000 a year on a farm of 55 acres, 35 of cultivated land. The bulk of the money was made by growing Irish potatoes. Twenty-one years ago Mr. Terry was called on to tell other farmers how these things had been done, both through the papers and at Farmers' Institutes, which were then about starting. He has never once sought any work of this kind. It came to him. What he had done seemed to many little less than miraculous. Since that time he has spent his winters talking to farmers through nearly all of the Northern States. He has also been constantly trying to stir them up to do better work through his articles in the papers. At present he writes only for the *Practical Farmer*, of Philadelphia.

Mr. Terry's great points have been, getting nitrogen from the air by growing clover in short rotation, making more plant food available by working the land more, manure saving (cement floors in stables, manure sheds, etc.). Thus he made his land productive. The house he lived in for fourteen years he sold for \$10 when through with it. He now has a beautiful home, costing with furnishings some \$6,000. Mr. Terry refused to consider an offer of the position of Professor of Agriculture in his own State University, and of other good positions, in order to continue talking and writing and working for the farmers of America. He is earnestly seeking to help them to prosper financially, and to be well and strong through long and useful lives.



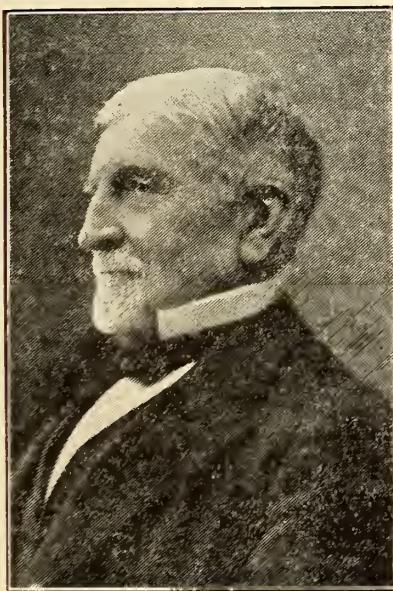
COL. J. B. KILLEBREW.

Through a long and busy life Col. J. B. Killebrew, of Tennessee, has done yeoman service for the farmers of the South, both by his pen and his own practical work on his farm. As Commissioner of Agriculture for his State for many years, as author of several books dealing with the soil, crops and climatic conditions of the South, and on specific crops, especially tobacco, and as a constant contributor to the agricultural press he has exercised a great influence for good upon the farmers of the South. These labors he still continues. They are with him a labor of love and he looks for his greatest reward in seeing Southern farmers prosperous. He is one of the strongest advocates for and supporters of the movement in favor of good roads, and looks forward with confidence to the early enactment of Col. Brownlowe's bill for granting national aid in this work.

Col. J. B. Killebrew was born in Montgomery county, Tennessee, of revolutionary ancestors, who emigrated from North Carolina and Virginia to Tennessee in 1796 and settled in the county near the place where he now has a farm.

He was educated at the University of North Carolina, graduating in 1856 with great distinction. For a short time he practiced law with success and was married to Miss Kate Wimberly in 1857, by whom he has had seven children, six of whom are living, four boys and two girls. His sons are all prominent in business and professional circles.

During the years 1871 and 1872 he was probably the busiest man in the South. He was agent of the Peabody Fund and canvassed the State of Tennessee in the interest of public education with the result that the next legislature adopted a thorough system of public schools. He was, during the same time, Commissioner of Agriculture for the State, which position he held for ten years. He was also the Secretary of the National Agricultural Association, and he likewise during this time established the "Rural Sun," of which he was editor-in-chief, an agricultural publication that soon made itself felt in every State in the Union and was pronounced by the best in-



formed agriculturists of the United States to be inferior to no other agricultural publication ever issued in this country or in Europe. With all these duties he kept his farm up to a high state of cultivation, and was one of the largest tobacco and wheat growers in the State. While Commissioner of Agriculture, he prepared and published several valuable books on the resources of Tennessee that have become standard works on the subjects of which they treat. The largest of them was *The Resources of Tennessee*, a volume of 1,200 pages in which the topography, geology, soils, crops, minerals, timber, industries of various sorts and the social condition of the people of the State of Tennessee, were described. This work, though printed nearly thirty years ago is still in demand. Special treatises were issued during his administration on grasses, tobacco culture, wheat-growing, sheep husbandry and various others.

In 1880 he was employed by Francis A. Walker, the Superintendent of the Tenth Census, to report on the culture and curing of tobacco in the United States. The report embraced in a quarto volume of more than 300 pages, is the most exhaustive work on tobacco ever issued in any country, and has established Col. Killebrew as the highest authority on this subject. He has since written an even more popular work on tobacco for the Orange Judd Publishing Company, of New York. No one in the South probably has a more accurate knowledge of its mineral, timber and agricultural resources than Col. Killebrew, and his works are largely quoted both in America and Europe. His numerous contributions to the newspapers and the addresses which he has delivered on different topics have not interfered with his regular work. His remarkable gifts of accurate and wide knowledge about many matters affecting the welfare of the South, as well as the broad range of his vision have been recognized time and again and most recently in his election to the presidency of the Tennessee Industrial League:

Col. Killebrew had charge of the subject of tobacco for the Standard Dictionary. He is now one of the editorial writers for the Manufacturers' Record and Southern Farm Magazine, published at Baltimore, and contributes to many other papers, among them *The Home and Farm*, of Louisville; *Nashville Banner* and *American Agriculturist*, of New York. He makes many speeches, both in the Northern and Southern States in the interest of good roads and is an able and earnest advocate for national aid in this work—a work in which every man, woman and child living in the country, is deeply interested. He has a highly productive farm of some 800 acres in Montgomery county, Tennessee, near Clarksville, which is cultivated with profit and success. He is one of the large tobacco growers of the Clarksville district

and produces on his farm, for sale, besides tobacco, wheat, hay, hogs, early lambs, cattle, goats and raises some mules and horses.

A year or two ago, he prepared for the University of Tennessee a publication on grasses, containing about 150 pages, which is well illustrated and has received commendations from the highest sources in Europe and America. Indeed it won the gold medal at the Paris Exposition as being the best practical work on the grasses.

Personally, he is popular. His affable manners, kindness of heart and generous hospitality have won for him an enviable position in the social realm. In no place is his popularity more manifest than with his employees. By his kind and pleasant association he has attached them strongly to himself and his work, and they exhibit for him the highest regard, affection and loyalty.

MR. JOSEPH E. WING.

Amongst the more recent acquisitions to the ranks of the writers for the agricultural press there is no one man who has attained greater preeminence and popularity than Mr. Joseph E. Wing, of Ohio. As a successful practical farmer with the greatest facility of pen for conveying what he has to say to the readers of the journal for which he writes, and as an expert photographer, who thoroughly understands how to photograph an animal or a rural scene and who, by this means, conveys to the eye as well as to the mind, the subject upon which he writes. His articles commend themselves to the attention of farmers everywhere. Through the columns of the Breeders Gazette, the leading live stock journal of this country, for which he now writes exclusively, he reaches every week an immense number of readers and is thereby enabled to do a great work for the uplifting of agriculture, and especially of the live stock industry of the country to which he more particularly addresses himself.

Joseph E. Wing was born 1862, in Hinsdale, N. Y. At this time his father, Wm. H. Wing, starting with nothing but a widowed mother and a large family younger than himself, had succeeded in not only keeping his mother, brothers and sisters comfortable, but had acquired a poor hill farm and small grocery store for himself. In 1867, attracted by the stories of more fertile farms in Ohio, W. H. Wing sold his possessions in New York and removed to the Darby Plains of Ohio, buying a farm near the village of Mechanicsburg, where the family have lived ever since. J. E. Wing received a good common school education and a brief course in a New York academy, but no college education.

About 1882 farming in the North seemed, es-

pecially to those who had seen war prices, to be on an unprofitable basis, and he travelled through the South looking for cheap land and profitable farming situations, but found nothing satisfactory. About the next year, his health troubling him, he went to the Rocky Mountains, California and Utah, where he worked at first in the mines and later on a cattle ranch, where he became very rugged in health and received valuable education in handling stock. He spent five years there, and then his father's strength failing, returned home to help care for the farm. In 1891 W. H. Wing died, leaving a widow and five children, of whom J. E. was next to the eldest, the youngest being fourteen years of age.

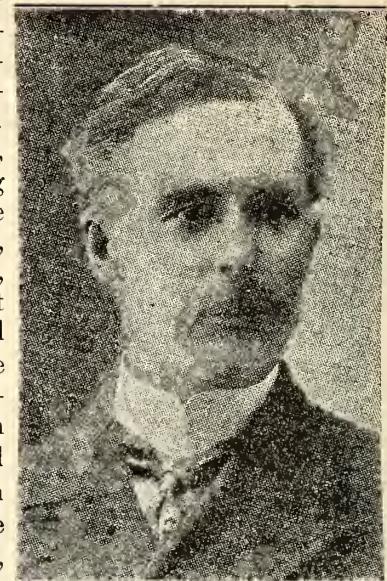
The farm was then of about 200 acres, mostly pasture and timothy meadow, and partly drained, but with few buildings. Very little cattle was kept, and it was necessary to hire very little help. Times were hard, but Joe and his younger brothers, believing that improvements and stock would more than pay for themselves, drained, manured and built barns and sheds, hoping to pay for them some time. Experiments with alfalfa proving successful, the timothy and clover were discarded, so that to-day Wing Bros. raise alfalfa alone for hay, harvesting 200 to 400 tons per year.

Since 1891 J. E. Wing and his younger brothers have spent about \$4,000 on farm buildings, \$3,000 on draining, and \$3,000 on improved stock. By means of these improvements they have been able to buy about \$7,000 worth of land and pay for it, certainly proving that the improvements paid.

All his life Mr. Wing has enjoyed writing for the agricultural press, so much so that for the past three or four years he has devoted nearly all of his time to this and to Farmer's Institute work in winter, and in this way he has become known to many farmers all over the country.

PROF. R. H. PRICE.

Amongst writers on Horticulture and Fruit Growing, our regular correspondent, Prof. R. H. Price, is taking a recognized position and doing good work in popularizing this branch of work on the farm.



Prof. Price is a native of this State and a graduate of the Virginia Agricultural College, and is therefore peculiarly well qualified to advise on his chosen branch of work in this section.

Prof. R. H. Price is a native of Virginia, and received his degree from the Virginia Agricultural and Mechanical College. Was assistant horticulturist of

the Virginia Experiment Station, and helped to set and care for the orchards and vineyards there. He resigned this position in 1892 to become Professor of Horticulture, Botany and Entomology in the Texas Agricultural and Mechanical College and Texas Experiment Station. He built up one of the best horticultural departments at these institutions known in the South. His

scientific work in a new classification of peaches over the old classification, which had stood for more than a century, placed peach culture on a more sure basis. His experiments with a small canning factory led the way for a large number of small factories in Texas and some other Southern States. His bulletins on fruits and vegetables have taken high rank. After teaching and experimenting along horticultural lines for ten years in Texas, his health began to fail owing to an attack of malarial fever, and he resigned in June, 1902, and came back to his blue grass farm, in Montgomery county, Va. One of his own graduates was elected to the position held by him. He is a member of various scientific and horticultural organizations. He is the author of a book on Sweet Potato Culture, which is recognized as a standard authority.

MR. J. W. INGHAM.

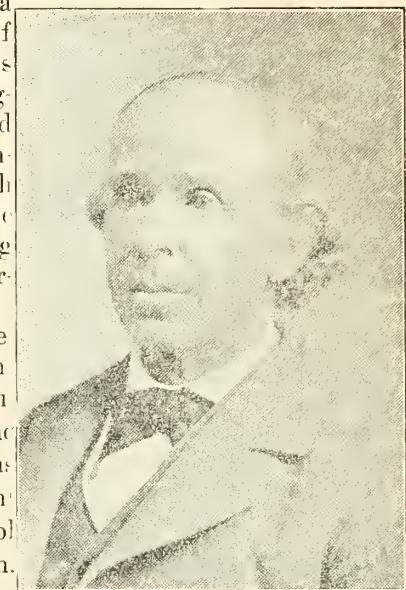
Mr. J. W. Ingham, of Pennsylvania, has for many years been a regular contributor to the agricultural press of this country and a frequent writer for this journal, and his work has commanded attention from the fact that he writes from an extended practical acquaintance with everyday work on the farm and always strictly to the point under consideration. This practical knowledge he has supplemented with wide reading of the best authorities and careful experi-

mentation of his own farm, hence what he says can be relied on.

J. Washington Ingham was born on the farm where he now lives, at Sugar Run, Bradford county, Pa., October 21, 1823. It is the farm on which his grandfather, Joseph Ingham, settled in 1795, when the country was a dense wilderness of woods, and where his father, Thomas Ingham, lived, labored and died. The family is of English Quaker stock, the first parent having settled in New Jersey about 1732.

Mr. Ingham received a good common school education and attended one term at the Athens Academy. He taught two terms of school when a young man. Practiced land surveying, "tended store," worked in the lumber woods, drew logs, tended saw-mill, rafted and ran lumber down the Susquehanna river to Maryland. Early in life he devoted himself to farming, it being an occupation more congenial to his taste, and giving him more enjoyment than any other business in which he ever engaged. Upon the death of his father, in 1855, he assumed the duties of his father's estate, which included a grist mill, a saw-mill, a farm, and a timber lot. Eventually he became the owner of the farm, and labored diligently and successfully to make it richer and more productive than ever before.

He was the first worthy master of the Wyalusing Grange, and represented it several times in the State Grange. His articles in newspapers have attracted much attention. He has written upon agriculture, history, and other topics of public interest. He has been a contributor to the New York Tribune, the Tribune Farmer, the Ohio Farmer, the Country Gentleman, and other farm papers and magazines, but has never, however, allowed his literary work to take his mind from his farming. He has never taken hold of the pen when the plow needed his guiding hand. His literary work has been done outside of business hours. The man who reads the farm papers and writes for them, will inevitably take more interest in his own farming, and endeavor to farm a little better every year. He says that what the farmer needs most, besides a thorough knowledge of his business, is more enthusiasm in its prosecution, and he has always endeavored to arouse this by his pen.



DR. HENRY STEWART.

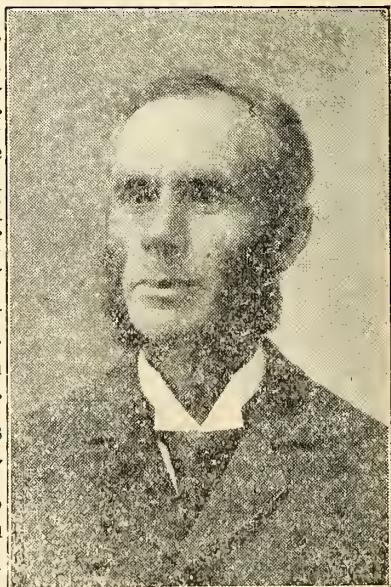
One of the oldest and most widely known contributors to the agricultural press is Dr. Henry Stewart, now a resident of North Carolina. His articles are always worthy of careful reading as he writes from the standpoint of a trained scientist with the added experience of a practical farmer and live stock man. We regret to say that we have been unable to procure a likeness of Dr. Stewart for reproduction in our columns.

Dr. Henry Stewart is a native of New York State, and was born in 1828. His father was a physician, by whom he was trained, first at home, and then by a thorough course of study and practice in Europe in that same profession; but as he was born and reared on a farm and among cows and sheep, this early experience led him to spend his life as a farmer, making his profession only an incident of it. When left at an early age, an only child, without parents, inheriting a dairy farm and a large interest in an extensive sheep ranch in Australia, he entered at once into a busy and strenuous experience, which has continued until the present time. Blessed with an unusually vigorous constitution, and never having lost an hour of his life by illness, an indefatigable worker and ardent student, and loving cows and sheep and the work of a farm, he soon acquired a thorough knowledge of his life's work, and made the acquaintance of the most prominent leaders of agricultural science and practice. In a rather long visit to England he made the acquaintance, among other leading agricultural scientists, of the noted Sir John Bennet Lawes, of that well-known first existing Agricultural Experiment Station—Rothamsted Park, England. Since then he was for years in frequent correspondence with Sir J. B. Lawes, chiefly in regard to the question of the acquisition by plants of atmospheric nitrogen, of which he had a firm belief through personal study and experiment. Sir John, however, strong in his belief to the contrary, was never able to convince Mr. Stewart of any flaw in his opinion, which, soon after, he expressed in one of his several books—*The Culture of Farm Crops*—in these words: "We know that some crops—clover, for instance—gather a large quantity of nitrogen from some source. All our experience points out the soil as the source of some 150 to 180 lbs. of this nitrogen gathered from an acre of land by a crop of clover, but our observation and most careful study go to confirm the belief that this nitrogen does in some way enter into plants through the roots, and so contributes to their substance, directly from the soil, but indirectly from the atmosphere circulating in the soil. My own experience in growing good crops on extremely poor soil by means of frequent culture confirms me in this belief—in spite of its unpopularity."

Another of his books—*The Dairyman's Manual*—was equally in advance of the then practice, and led to some important improvements in the making of butter (especially of the granulated form of it), and cheese. He was the originator of the practice of bottling milk for sale. His latest work—*The Domestic Sheep*—has taken the foremost place in its line, having gone through several editions during the five years since its publication. He is still in active work, and is a regular correspondent of several leading agricultural publications. His present home is at Highland, N. C.

PROF. THOMAS SHAW.

Amongst agricultural writers and teachers there are few who have done more for farmers and live stock owners than Prof. Thomas Shaw, now of St. Paul, Minn., but for many years professor of Agriculture at the Ontario Agricultural College, Canada, and later Professor of Animal Husbandry at the Minnesota Agricultural College. Whilst carrying on his work as a teacher in these two colleges he was also actively engaged in farming, and edited whilst in Canada the Canadian Live Stock Journal, and now edits *The Farmer*, published at St. Paul. He has always been active in the work of Farmers' Institutes, having organized a large number in Canada, and for several years was Secretary of the Ontario Central Farmers' Institute. He has written a number of exceedingly useful books on agricultural subjects, among them, "Weeds, and How to Eradicate Them," "The Study of Breeds," "Forage Crops Other Than Grasses," "Soiling Crops and the Silo," "Grasses, and How to Grow Them." These books evidence the painstaking character of the author and the practical bent of his mind. Whilst sound in theory they are strictly practical in application. Mr. Shaw has always kept himself closely in touch with farmers, and is a frequent contributor to the best agricultural and live stock journals of the country. He was born in 1843 on a farm, and never had the benefit of a college education.



Farm Management.

WORK FOR THE MONTH.

The new year 1904 does not open with the same prospect of good returns for products which may be raised on the farm as has been the case during the past three or four years. There is a distinct pause now being marked in the business activity which has so long prevailed. Whether this is to be intensified into a lasting depression of all industrial progress or is to be merely a temporary lull yet remains to be seen. We are, however, of opinion that whichever may be the case, products of all kinds are not likely to more than maintain existing values, unless some disaster should overtake the crops now to be prepared for or already seeded. We base this opinion on the fact that statistics show more than average crops of grain in the other exporting countries of the world, and with the exception of the oat crop, of fair average crops in this country. Importing countries will, therefore, be able to secure the supplies they may need at existing prices, and the demands of the people of this country are likely to be less, as the wages of labor are being reduced all over the country, and this means decreased consumption all along the line. Beef and hogs have already dropped in value to below what conditions seem to warrant, and for these products we are inclined to look for somewhat better prices, notwithstanding the probable decreased demand. As far as we are able to judge, there is no superabundance in quantity of either beefes or hogs, and the present low prices have been brought about rather by reckless selling than by actual conditions of market demand. Cotton is an exception to all the other crops. It is selling at an exceptional high figure (13 cents), and seems likely to maintain this price, as the crop is undoubtedly short and the world needs it as there are no supplies held over anywhere. Tobacco is gradually hardening in value, and we look to see better prices before the close of the sales. This crop is, in our opinion, going to prove short of the demand, especially in the finer types and grades, and these will be likely to make more money. Whilst, on the whole, we do not therefore look to see higher prices for the staple products of the farms and plantations in the year now commencing, it should be borne in mind that existing prices are yet distinctly (except as to beef and pork) in advance of those of a year ago, and considerably higher than those of a few years ago, and therefore may be considered as on the whole satisfactory and yielding a fair profit to producers who exercise skill in the management of

their farms and make average crops. What the Southern farmer most needs to do is to increase the yield per acre, and not the number of acres cultivated. In this way he can keep down the cost of production, and thus make the average profit greater. This point presses for attention, not merely because of the halt in the demand, but because of the fact that labor is more difficult to procure and control all over the Southern country. In order to maintain and increase production machinery will have to be much more largely used than in the past, and fewer hands of a more skilled type be employed. With the improved machinery now so cheaply offered much better work can be done, and land be better prepared in less time than by old methods, and the handling of heavier crops be accomplished much more quickly. There is distinct economy in the use of machinery, and when this is freely recognized we shall see a much heavier production of crops at reduced cost. With more economical production, a greater yield on each acre, brought about by better preparation of the land, there is no reason why farmers may not look forward to fairly prosperous times, even though business conditions should not be as buoyant as they have been during the past three or four years. We intend to do our best to help in this by continuing in each issue an article on the Work for the Month. These articles have in the past received high commendation from hundreds of our readers, and we observe are being copied in numbers of our exchanges. Several also of the leading agricultural journals in other sections have taken up the same idea in one form or another, thus giving evidence of the necessity for this systematic reminder of what should be engaging the attention of farmers in each month as it comes round. We aim to always be a little in advance of the season with each article's advice, so that there will be time given in which to start the work advised and yet hit the best month in which to complete it. Of course, discretion will be necessary in acting on the advice according to climatic conditions and elevation, or nearer approach to the earlier season in the Gulf States. It is our purpose also to continue our "Enquirer's Column." It has become the medium for conveying information and advice to thousands of farmers upon every topic affecting the agricultural interests of the South. We welcome enquiries from all our subscribers, and do our best to give intelligible and reliable answers to every one. We earnestly beg of our subscribers to make use of this

column. In this way they can get help and give help to their brethren. The other departments of the journal will continue to receive attention, and we ask that our subscribers will help us to make them interesting and helpful by sending us communications for publication.

The actual work that can be done on the farm during January is usually small. If we have any winter at all, we usually get it in January, and labor is generally badly disorganized, as the Southern negro loves to keep Christmas and New Year for a long time into the month. See that you keep plenty of feed convenient for feeding, so that if reduced to the necessity of caring for your stock alone, they may not suffer. The negro is very thoughtless, and rarely allows any care for the wants of the live stock to interfere with his pleasure. After the long spell of cold weather, which we have had so much earlier than usual, it may be that January will be milder than usual, and that some work may be done on the land. Do not fail to utilize this opportunity if it comes, so that if later months be unseasonable work will not crowd upon you. The cleaning up of land intended to be cropped, and the making and repairing of fences, drains and ditches, can be well done in mild weather, and thus materially aid in forwarding work in the later seedling months. Plowing and breaking of land should be continued at every opportunity, and this should be thoroughly done. Plow deep and sub-soil wherever there is a good clay bottom. See that the hard pan is broken thoroughly, but do not turn too much of this on to the surface. An inch or two added to the depth of the soil turned is sufficient, and this is better turned so that the furrows stand on edge rather than completely inverted, as in this condition the new soil is easier to mix with the old than if laid all on the top. Left in this form the weather will disintegrate the soil, and so aerate it as to make available the plant food in it. Wherever possible give a dressing of lime on the surface—say 25 to 50 bushels to the acre—after the land is plowed, and harrow this in lightly. This will have time to act on the soil before seeding time, and will do more to promote fertility and a good crop than fertilizer applied later. Nearly all land in the South needs lime, and most of it needs it badly. The application of lime tends to make available the phosphoric acid and potash in the soil, of which there are usually large stores in an inert condition. It also corrects acidity in the soil, and thus promotes the activity of microbial life, which is so essential to fertility. Deep breaking of the subsoil prevents washing of the surface by

permitting the rainfall to permeate the soil and become there stored for the future use of the crop. It is a well demonstrated fact that the quantity of moisture stored in the soil bears the most intimate relation to the yield of the crop. Only through soil moisture can plants be fed. They take nothing in solid form.

Whenever the land is dry enough to haul on, get out farm-yard and pen manure. Let this be at once spread either as a top dressing for wheat or winter oats, or as a preparation of the land for spring sown crops. Whatever plant food is leached out of the manure by the rains of the winter and spring will then be at once absorbed by the soil and be held there. The mineral fertilizers, acid phosphate and potash salts, can be safely applied along with the farm-yard manure. These will not be lost by leaching, but will become assimilated with the soil and be rendered more available for the crop than if applied just before the crop is planted.

Fill the ice house at the first opportunity. It is always unsafe to let a chance of cutting and getting ice slip by in the South. The first chance is often the last for that winter.

In wet and stormy weather utilize the time in repairing, cleaning and painting the tools and implements stored in the tool house, and take note of any repairs needed and order same at the earliest opportunity, so that the machines may be ready for work whenever needed.

TALL CORN.

Editor Southern Planter:

I notice that you say that Cocke's Prolific is one of the tallest growing corns you know of. I wish that you could see it as it has been bred here. It is by no means a tall growing corn as compared with the general character of corn here. In fact, it has been planted on the College farm in rows three feet eight apart and ten inches in the row, and on dry, sandy upland, made 88 bushels per acre. It is a corn of very moderate stature, medium sized ears, and very prolific. If the original Cocke's Prolific was, as you say, a very tall growing corn, the fact that we have it here of perfectly medium stature, with ears near the ground and near the middle of the stalk, shows that we can breed corn in the South to a medium stature. Nor is it now a late corn, though lateness is a minor consideration in this climate, for the past summer we ripened a crop perfectly, planted

on a wheat stubble some time after the wheat was harvested. The fact is that the corn breeders West have devoted all their attention to the character of the ear, a very erroneous plan for breeding any plant. In the improvement of a plant we must take the whole plant into consideration, form an ideal of what we want the plant to be, and breed towards that ideal continually, taking note of every character of the plant, and not merely a single feature. Our farmers have for generations been breeding for the best ear, and they have gotten the big ear at the expense of other important characters. Breeding for a single feature only in any plant will not result in the best production. Of course we want well formed ears, but we do not want them borne on stalks that have the ears out of reach and but a little stalk above them. We want a plant that will bear its ears about midway the stalk, and within easy reach. I have recommended the use of the lowest ear in breeding our long legged corn down to a better stature, because it will have that tendency, as I have abundantly proved. When we get the ideal plant it will be time enough to breed for the ideal ear along with it, but we need the ideal plant in the South now more than anything else. Then, too, the breeding of corn must take the climate into consideration. Earliness is a very important point in the North and West, but can be entirely ignored in the South, or at least not particularly sought after. In breeding for prolificacy in any plant we invariably reduce the size of the individual fruit. The Ponderosa tomato, for instance, has been bred for size, but it will not produce a tenth part of the number of fruits that the little pear shaped ones bear. The breeding for the big ear of corn produces the big ear and only one on a stalk, and that with the tendency to get higher and higher from the ground, while the breeding for a better stature and more prolific character decreases the size of the individual ears, but greatly increases the general product not only by reason of the increased number of ears, but by the decreased stature of the plant, enabling us to get more stalks on the acre. No true improvement can be made in any plant while we breed for a single character and neglect the plant itself as a whole.

W. F. MASSEY.

ENQUIRER'S COLUMN.

Enquiries should be sent to the office of *The Southern Planter*, Richmond, Va., not later than the 15th of the month for replies to appear in the next month's issue.

Pumpkins for Cows.

We observe that we inadvertently overlooked re-

plying to a query as to the feeding of pumpkins to milch cows in our last issue. Pumpkins may be fed to milch cows without any fear of their drying the cows. They are an excellent food for cows, being much like turnips, rutabagas and beets in their composition and nutritive qualities. They are cooling in their action on the stomach and act as appetisers. —ED.

Dehorning Cattle—Cultivating Corn.

1. Can cattle be dehorned at this season of the year without injury to them?

2. Also please tell me something about the riding cultivator for corn. Which is the cheapest and best way to cultivate corn, with the riding cultivator or the old fashioned double shovel plow?

Albemare Co., Va.

A FARMER.

1. Cattle may be dehorned at any time in the year but it is best not done when flies are troublesome, as they are apt to get into the wounds and sometimes cause trouble. Cut off the horns and apply some tar to the wounds and keep the cattle in the barn or shed for a day or two if the weather is frosty.

2. There is no comparison with the work which can be done by a good riding cultivator as against the old double shovel plow either in quantity, quality or in its effect on the crop. A double shovel plow is almost as much out of place in a corn field as a turning plow. We would not use either of them if we could get any other kind of cultivator. There are several riding cultivators on the market which do excellent work.—ED.

A Goat Fence—Subsoil Plow.

1. Can I make a fence with four strands of wire that will hold goats? If so how far apart should each strand be placed?

2. Can I have a subsoil plow stock made at home? If so give full particulars.

SUBSCRIBER.

Lancaster Co., S. C. e

1. We doubt whether you can make an effective goat fence with four strands of wire. A fence to turn goats should be at least 4 feet 6 inches high, and better 5 feet, and should have at least 6 strands of wire.

2. A subsoil plow can easily be made at home. Take an old plow and knock off all the iron work from the beam, leaving only the beam and handles. Then take an old Sword coulter to the smith's shop and let him cut off the point and swell the end into a head that he can put through a hole an inch in diameter made in a piece of iron 3 inches wide and 6 inches long and a quarter of an inch thick. Rivet this sole onto the coulter and turn the front end of it slightly down so that it will bite and hold into the

ground. Then fix this coulter into the plow beam where the stock of the plow formerly fitted and you have a subsoil plow that will do good work. The sole of the coulter should be hardened so that it will wear sharp and cut easily into the subsoil.—ED.

Subsoiled Land—Peas—Fertilizer for Artichokes.

1. I subsoiled a piece of land last year. What is best to do to it this year?

2. Will peas grow after a crop of sweet potatoes?

3. What kind of fertilizer should be used to grow artichokes?

J. B. ELLIOTT.

Camden county, N. C.

1. The land subsoiled last year should be plowed deeply this year and be worked finely to the full depth plowed and should then make a good crop if at all fertile.

2. Yes. Peas will grow after sweet potatoes. They usually make a good crop following a cultivated and fertilized crop.

3. Use muriate of potash and acid phosphate on the land to be planted in artichokes, say 50 pounds of potash and 300 pounds of acid phosphate to the acre.

—ED.

Artichokes.

Please tell me if artichokes are good to feed to cattle and milch cows?

J. V.

Surry county, Va.

Artichokes have about the same value as a food for cattle or hogs as Irish potatoes. Their value as a food for cows consists rather in their action as a cooling feed stimulating the appetite and rendering the animal capable of consuming and assimilating richer foods for a longer period than as in themselves nutritious. We know farmers who feed them to cattle and find profit in doing so.—ED.

Crimson Clover—Carrots and Parsnips—Bones for Fowls.

1. What is the value of crimson clover for feed? Can it be fed to horses?

2. Are parsnips and carrots valuable as a market crop? What is the yield per acre, and what is the average price per bushel?

3. Are bones from cooked meat as valuable as green bone for egg-producing?

E. M. BALL.

Washington county, Va.

1. There is very little difference in the nutritive value of crimson clover and red clover. The crimson is a little richer in protein than the red. There is, however, risk in feeding the hay to horses unless the clover has been cut before blooming. After the clover blooms and the seed is formed the awns on the seed

are very hard and bristly and these when eaten in the hay are liable to mat together in the stomach and form balls which cause obstruction of the bowels. We have had several of these balls taken from the bowels of horses which had died from the obstruction, as large as an orange. We have never had any complaint of this trouble with cattle eating the hay.

2. There is only a very limited demand for carrots and parsnips in Southern markets and the Northern markets are supplied from nearby places. We cannot state the average price per bushel. The few sold are generally priced by the bunch. They are good feed for cattle, horses and pigs. An average crop of carrots and parsnips on good land would be from 12 to 15 tons per acre.

3. Cooked bones whilst valuable for poultry as aids in egg-production are not so valuable as green bone, as the latter have usually considerable meat and gristle adhering to them, and the marrow in them, all of which are of great benefit to the hens, taking the place of the insects, grubs and worms which they get in summer.—ED.

Lice on Cattle.

Will you please tell me some remedy for lice on cattle? I have tried kerosene, also tobacco juice, but find that they still have them. I lost several head last winter and they have been poor all summer. Most remedies are too severe to be used in winter.

J. D. H.

A decoction of *Coenlus Indicus* (fish berries) is a good remedy. Take half a pound of the berries for each animal, pound fine, then add 2 quarts of vinegar and set on the stove to simmer for an hour. Rub the decoction thoroughly into the hair on the infested places. This will remain effective long enough to kill all the lice as they are hatched from the eggs. Kerosene emulsion is also very effective. Kerosene 2 gallons, common or whale oil soap, one quarter of a pound. Water 1 gallon. Heat the soap solution and add it boiling hot to the kerosene. Churn the mixture for 5 or 10 minutes. Dilute with eight parts of water and rub it thoroughly into the hair. Fifty animals can be treated with 10 gallons.—ED.

Pecan Growing.

Will you kindly tell us what is the trouble with our pecan tree? It is situated on a clay knoll, and is said to be 40 or 50 years old, but does not bear over a few quarts of nuts. Is the trouble due to the tree being alone, or does it need to be fertilized, and if so, how much and what kind would you advise using?

Horry county, S. C.

J. W. LEWIS.

We cannot account for your tree not bearing more

nuts if it is a strong growing healthy tree. Its standing alone will not account for the failure, as both the pistillate and staminate blooms are borne on the same tree and therefore it should fertilize its own blooms. It is doubtful whether fertilizing the ground would help it, indeed it may be that the tree is already producing wood instead of fruit and fertilizer would only make this worse. Perhaps in another year or two this habit will change.—ED.

Holstein-Jersey—Brome Grass.

1. I have a Jersey bull which has some white spots on him. Some people call him the Holstein-Jersey. I wish to know if there is such a thing as the Holstein-Jersey, and if so, how it came about?

2. Also wish to know if Brome grass will do well in the South?

W. P. DAVIS.

Cherokee county, S. C.

1. There is no such breed of cattle as Holstein-Jerseys. Holsteins and Jerseys have been crossed upon each other but the cross is not a desirable one as the two breeds are so different that they do not "nick well" as horsemen say. The Jersey is a small fine boned animal. The Holstein a large, strong boned animal. If crossbred animals are desired the types crossed should be nearer alike and even then the result is a doubtful quantity and quality.

2. Yes. We have seen fine sods of Brome grass grown in the South. In this State it does well.—ED.

Rotation of Crops.

I desire to start a rotation of crops on my farm and would ask if you do not think that I can maintain and even increase its fertility by the following course: First year cowpeas and crimson clover. Second year corn with crimson or red clover sown when worked the last time. Third year, pasture. I would use a small application of fertilizer on the corn and pea crop, also about twenty-five bushels of shell lime per acre at some time during the rotation.

J. MAYO ROBINSON.

Lancaster county, Va.

Yes, the rotation suggested will no doubt improve the fertility of your land and the yield of your crops. We would advise the use of acid phosphate only, on the land before seeding the peas, say 300 pounds to the acre. Follow the cowpeas with crimson clover which plow down in April or May for corn, applying 25 bushels of lime to the acre before planting the corn. Sow a mixture of crimson clover, red clover and a bushel of mixed grass seed in the corn at the last work. This should give you a fair pasture the following year. Plow the sod down in the fall and

sow wheat or winter oats. Then repeat the rotation.—ED.

Navy Beans.

A subscriber asks us as to the yield of this crop on fairly good land and as to the fertilization and cultivation of the crop. On land suitable for beans, a good loam soil, yields of from 20 to 30 bushels to the acre, are obtained in a suitable season. The land should be well prepared but not be made overrich, as this has a tendency to cause the crop to run to vine rather than seed. A phosphate and potash fertilizer is the proper one to use with a small percentage of nitrogen. The crop generally does best on land heavily manured for the previous crop, as after an Irish potato crop. Cultivation should be frequent during the early growth of the plant but should never be done when the plants are wet with dew or rain, or they will rust or damp off. The most critical period in the handling of this crop is the curing of it. If the weather should be wet after the vines are pulled or cut and during the curing, the beans are almost certain to be stained and mouldy, and this interferes seriously with their market value. After threshing the beans should be hand-picked if the best price is to be got for them.—ED.

TOMATOES FOR CANNING.

Editor Southern Planter:

Our experience the last season with a dozen varieties of tomatoes for canning justify us in repeating the statement that Spark's Earliana has proven to be the best variety for this section, as it ripens before any other variety, and always bears abundantly. On our own ground a single plant has been known to produce as many as forty tomatoes of large size; smooth and of a bright, red color. This plant was not more than two feet high, but was branched out in every direction, and was so heavily loaded that there could scarcely have been another tomato grown on its branches. The Aeme was two weeks later, and did not mature one-third as many tomatoes. Dwarf Champion was of large size, and as smooth as any one could wish, but not equal to Earliana in flavor or size. We would advise every canner in this State to at least give this variety a trial on a small scale until they are fully convinced that it is adapted to their immediate locality. We are confident that with us Earliana will produce one-third more bushels to the acre than any other variety, and is one of the best canning tomatoes that we have ever seen.

We are glad to know that Virginia is becoming a canning State, and utilizing fruit that usually goes to waste.

E. W. JONES NURSERY Co.

Carroll Co., Va.

Trucking, Garden and Orchard.

MEETING OF THE VIRGINIA STATE HORTICULTURAL SOCIETY.

Editor Southern Planter.

The eighth annual meeting of the State Horticultural Society, held at Pulaski, December 2nd and 3rd, was a good one.

The addresses were in the main short, timely and to the point. The audience was large and seemed to appreciate the remarks of the speakers.

The Pulaski people "did the proper thing" in entertaining the Society. The hall was large and convenient.

There was a magnificent display of apples, which received many flattering comments from men who are considered experts in judging good apples. I doubt if there is another State in the Union which could show a better quality of fruit than was exhibited. The Pippins, Baldwins, Winesaps, Virginia Beauties, York Imperials, Roxbury Russets and Wolf River apples were the finest I have ever seen. To look upon such an exhibit made me feel two degrees prouder of Old Virginia. There were old men and young men present who were apple enthusiasts and they were delighted with the exhibits.

The politician had no show in the meeting. Progress along the line of fine apple growing was the prime desideratum for commanding attention. I heard of apples being sold this fall in Virginia for three dollars per barrel on the track. The large number of barrels, some ten year old trees, were said to have produced would look like exaggeration in print.

The greatest enemy the apple grower in the State now has to contend with was by unanimous consent agreed to be the San Jose scale. But the growers seemed to be fighting this pest successfully. Intelligent spraying was doing the work. The lime and sulphur wash was regarded by all as one of the best sprays for the pest. This spray should be put on the trees before the buds open, and be repeated after the trees leaf out if necessary. The main point is thorough application. For this wash or spray, Prof. Alwood, of the Virginia Experiment Station, recommended the following formula:

30 pounds of lime;
20 pounds of sulphur;
10 pounds of salt;
100 gallons of water.

Cook thirty minutes and keep well stirred. Strain

well before spraying to prevent the particles of lime from clogging the nozzles.

Dr. J. B. Emmerson read an important paper on the scale insect.

R. H. Price discussed the subject of small canning factories in Virginia.

Prof. G. Harold Powell gave a most interesting talk on handling fruits for cold storage.

Mr. S. H. Derby, of Delaware, discussed the subject of culture and spraying of orchards.

Prof. W. B. Alwood gave an interesting stereopticon lecture on some orchard pests.

Prof. J. L. Phillips gave a report on work done under the State crop pest law.

Senator S. L. Lupton and the Hon. Geo. E. Murrell discussed the subject of "How best to advertise the resources of Virginia."

Prof. H. E. Van Deman discussed "Old Orchards."

Below is given a list of those whose exhibits won special premiums: For best collection of three to ten varieties, Mr. Geo. W. Via received first premium, Dr. S. S. Guerrant second, Mr. Geo. E. Murrell third, Mr. Joseph Kelley fourth and Mr. W. W. Otey fifth. A diploma and prize were given Mr. Geo. W. Via for the best plate of Albemarle Pippins. The premium for second best plate was awarded to Mr. Geo. E. Murrell. The first prize for best Grimes Golden was awarded to Dr. S. S. Guerrant, for second best a premium was awarded to Mr. Joseph Kelley. The premium for best Arkansas Black was awarded to Mr. James Caulfield, second best premium was awarded to Mr. Geo. E. Murrell. The first premium for best York Imperial was awarded to Mr. Joseph Kelley, second best premium was awarded to Mr. John R. Guerrant. For the best Winesaps first premium was given to Dr. S. S. Guerrant; second best to Mr. S. T. Thompson. A special premium was awarded R. M. White for best Virginia Beauty. Mr. Geo. W. Via's exhibit of Jonathans received special mention. He was awarded the sweepstake prize for best Albemarle Pippin. A sweepstake prize was awarded Mr. Geo. E. Murrell for best Missouri Pippin. The Roxbury Russets exhibited by J. L. Tate received honorable mention, also the Bellflowers exhibited by John R. Guerrant. Hon. H. C. Wysor received a premium for the best package of apples. Dr. J. B. Emmerson had excellent Paragon chestnuts on exhibition.

The superiority of sprayed fruit over that unsprayed was very clearly marked in most cases. We noticed one or two exhibits, however, from orchards that had not been sprayed where the fruit showed up well. But the orchards may be growing in localities where the fruit parasites have not yet taken hold. I am still convinced that the advice I have frequently given in the *PLANTER* in regard to spraying is important. To be most successful in fruit culture the orchardist must spray.

There was some little lack of system in the way the exhibits were arranged, but the attention of the exhibitors was called to this by a member of the awarding committee, and we expect a more systematic exhibit next year.

The Society is in a flourishing condition. The proceedings are published in book form and every apple grower in the State should have a copy which he can obtain by becoming a member of the Society. There are able and wide-awake men in the Society. The character of work the Society is doing for the State is of a high order.

R. H. PRICE.

Montgomery county.

ALBEMARLE PIPPINS.

In our last issue we published an interesting communication from Mr. Cyrus T. Fox, the State Pomologist of Pennsylvania, on the Virginia apple crop in which incidentally he claimed that the Albemarle and Newtown pippins were identical. We added a note to the article expressing a doubt of this identity. Mr. Fox has since published an article in the *Reading (Pa.) Times* upon the Virginia apple crop in which he discusses this point of identity. We append an extract from this article in which he gives his reason for believing the apples identical. We shall be glad to hear from our local pomologists on this point. Our understanding of the subject is that these local authorities claim for the Albemarle Pippin that it is a distinct variety and that it is of local origin. Whether this be so or not it can undoubtedly be claimed that the Albemarle is a better apple than the Newtown, whether as a result of different origin or different soil and climatic conditions of growth. The market endorses this view by the prices paid.

"The leading apple of Virginia, on account of its productiveness, beautiful appearance and fine quality, is the Albemarle pippin. It is grown largely in Albemarle county, from which it has derived its name. In a contribution by the writer of this article to *THE SOUTHERN PLANTER*, published in Richmond, Va., he was made to say "this variety is undoubtedly identical with the Newtown pippin of the North,"

and Colonel Jackson, the editor, added a brief note: "We doubt this identity."

But the important word, "yellow," was omitted. There are two distinct Newtown pippins—the green and yellow. The former is known as *Newtown pippin*, pure and simple, and was placed by the eminent pomologist, Charles Downing, (with whom the writer corresponded until Mr. Downing's death) at the head of all apples. The *Yellow Newtown pippin*, to which in the writer's opinion, the *Albemarle pippin* bears so close a resemblance as to be almost identical, is very much like the green *Newtown*, except as to color, and it is difficult to say which is the superior fruit. The *Yellow* is handsomer, and has a higher perfume than the *Green*. When fully ripe, it is yellow, with a rather lively red cheek and a smooth skin. The flesh is firm, crisp, juicy and possesses a rich and high flavor. And this description of the *Yellow Newtown pippin* exactly answers that of its *Virginia* cousin, the *Albemarle pippin*, if the latter is not its prototype.

The *Albemarle pippin* may be found in the markets of the principal cities of the United States, but especially in those of Washington, Baltimore, Philadelphia, New York, Boston, Pittsburg, Cincinnati, Chicago and St. Louis. *Albemarle* county is still the largest producer, and it was estimated that the shipments from that county this fall would exceed 50,000 barrels. Other *Virginia* counties that grow the same variety largely are (mentioned in the order of their importance as to the number of barrels shipped) *Frederick*, *Augusta*, *Warren*, *Fauquier*, *Wythe*, *Rockingham*, *Potetourt*, *Roanoke*, *Montgomery*, *Nelson* and *Culpeper*. Each shipped to market this fall from 10,000 to 25,000 barrels, while large quantities were used at home for cider and vinegar, and stored for the winter and spring.

To state some of the wonderful yields would lay the writer almost open to the charge of exaggeration, but the statements about to be made can all be proven. One grower in *Roanoke* county, twenty miles from the city of *Roanoke*, sold his crop of apples for \$16,000. *J. Coles Terry*, of the *Bent Mountain* district, in the same county, has 4,500 acres at an elevation of 2,800 feet, where he is raising fruit very successfully. His orchards contain mostly *Albemarle pippin* trees. From 25 acres he realized this fall \$5,500 for the selected apples and there were still bushels of "culls" which were converted into cider and vinegar. Think of that, you wheat growers, \$220 per acre from apples. The product of thirty-six of *Mr. Terry's* best trees sold for \$455. He exported some of his finest apples to *Liverpool*, obtaining \$11 per barrel."

When corresponding with advertisers, kindly mention the *Southern Planter*.

Live Stock and Dairy.

EFFECT OF FEED ON THE QUANTITY AND QUALITY OF MILK.

Editor Southern Planter.

This is a very important subject, and for the sake of economical management every dairyman should be satisfied about it. It is a matter of dollars and cents. The simple fat tests now so well known enable the milk of any cow to be easily tested and its richness positively settled. If it is true that better or different feeding will not permanently improve the richness of milk of a cow which gives a low, unsatisfactory test, it is folly to waste feed upon her attempting the impossible. Owners will be much more willing to dispose of cows proved by test to be giving poor milk, if fully convinced that no treatment will make this milk much better. It is therefore desirable to place the facts on this live question within the reach of as many owners of dairy cows as possible.

There is a popular notion that fat can actually be fed into milk. Many dairymen claim that milk made from green food contains more water and less fat than that from dry food. By close observation it has been found that the fat content is not diminished by turning cattle from dry feed to pasture. Food containing a high percentage of water, as watery herbage or brewers' grains, tends to reduce the solids in milk. The explanation offered for this condition is based on the assumption of a more watery character of the blood, due to the excess of water in the food. A poor watery diet impoverishes the blood and leads to the production of watery milk.

At the New York station the milk yield was found to decrease quite steadily from the time the cow is fresh, to about the middle of the lacteal period, after which it is quite constant. This shrinkage was quite uniform through the first feeding with a maximum protein ration but more rapid during the last feeding when the protein-rich ration was diminished. The shrinkage in yield was accompanied by an increase in the percentage of fat and solids from 3.7 per cent. and 12.9 per cent. respectively, at the beginning to 4 per cent and 13.7 per cent. at the end of the test.

All cows shrink in quantity of milk as they get farther from calving. If they are farrow, this shrinkage in quantity is accompanied by almost no change in quality, even until they go dry, provided they are still farrow. If they are in calf, the milk increases in quality as it decreases in quantity; this increase

is light, only one-twentieth during the first six months after calving, but becomes quite pronounced just before the cow goes dry. The milk of a cow the first few days or weeks after calving is very variable in quality. After a third or fourth week of lactation the percentage of fat in the milk remains nearly constant until the seventh or eighth month or until the quantity of milk begins rapidly to diminish. Pregnancy always has the effect of decreasing the flow, first due to a tendency of the body to take on flesh for a time after conception, and in a later period the nutrition is utilized by the fetus. In this respect individuals show the widest variation. With many the effect of again becoming pregnant is scarcely noticeable, and with others it is so great as to interfere with the usefulness of the animal.

A cow bred or born to give rich milk will always give rich milk if she is fairly well fed and treated, with little regard to the kind and character of her food; and if a cow starts out in life by giving milk poor in fat, no method of feeding and no kind of food will materially or permanently change the character of the milk. There is a tendency for the milk to have the same quality throughout the entire history of the animal, from a heifer to old age; that is, the heifer that gives milk of certain richness will not be apt to vary much from this quality as she increases in age. There may be a slight increase in the percentage of fat as age advances, but average figures show the whole variation to be only about one-sixth of 1 per cent. Age will influence the quantity of milk. From 2 until 5 years there is a gradual increase in the quantity, after which time it remains about the same during the periods of activity, until the age of 11 or 12 years, and then it decreases.

In tests for short periods (ten days to three weeks) the results of experiments seem to be entirely consistent with the conclusion that scant feeding, or the feeding of unbalanced rations, exerts an entirely insignificant influence on the fat content of milk. The cows lost in weight, and in some cases there was a slight shrinkage in yield in milk, but the composition remained practically unchanged, indicating that it is the flesh of the animals that first declines when the food is insufficient. When in good condition a cow will give her normal quality of milk at least for a limited time, even though the quality or quantity of her food is deficient. A heavy milker will take flesh or fat off her body in order to give her normal qual-

ity of milk. In the case of long-continued, scanty, and poorly balanced feeding, it seems clearly established that the fat content of the milk may be materially reduced below the normal. However, the fat content of milk cannot be increased at will by increasing a normal ration. The further addition of nutrients to a normal ration has little or no permanent effect upon the percentage of fat in the milk.

The proportion of constituents in milk depends largely upon the kind of cow. It is impossible to make any perceptible change in the relation of solids to each other. For instance, if there is 3.5 per cent. casein, 4.7 per cent. sugar, and 4 per cent. of butter fat; there it stays right along. If it were not so, it would be easy to take a Holstein and make a Jersey butter cow of her; or very easy to take a Jersey and make a Holstein milk cow of her, if you could change the per cent. The percentage is practically fixed. Some cows give richer milk than others. This is because they are bred so, and not because they are fed so. The Guernseys and Jerseys (often incorrectly called Alderneys) have the reputation of giving the richest milk. But there is yet a great difference in this respect in individual cows, or perhaps rather in cow families. An animal may belong to the best of breeds and have a pedigree reaching over into the Old World but if it is not accompanied with individual merit it is a thoroughbred scrub.

The butter globules are largest in size early in the period of lactation and constantly diminish as lactation progresses; at the same time they increase in number so that the total amount of fat is not greatly changed.

While the food does not influence the amount of fat in the milk it does to a certain extent affect the character. Linsseed meal, gluten meal, etc., make a soft fat while cotton seed meal, seeds of certain legumes and wheat bran make a hard fat. The hardness of butter seems to depend more upon the character of the food than upon its nutritive ratio. The size of the fat globules and color vary with the breed.

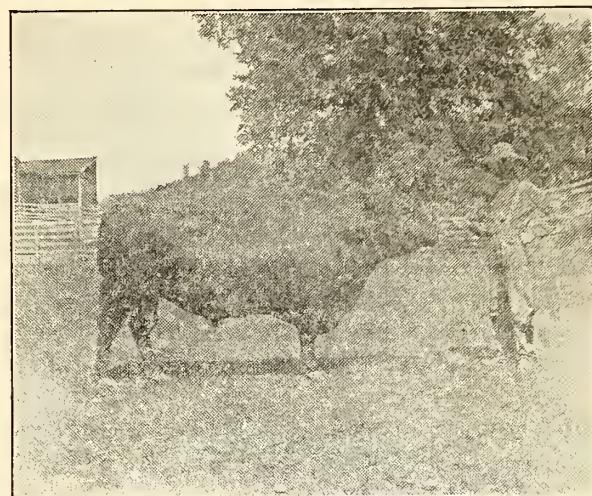
An increase in quantity and quality of milk over the present normal standard is to be looked for more from breeding than from feeding.

Average per cent. of butter fat in milk from the different breeds: Jersey, 5.35; Guernsey, 5.16; Devon, 4.60; Shorthorn, 4.05; Ayrshire, 3.66; Holstein, 3.42.

GEO. H. C. WILLIAMS.

District of Columbia.

Try copperas in drinking water as a preventive and cure for poultry cholera.



A VISIT TO A RED POLL FARM.

Editor Southern Planter:

Apropos of the very interesting editorial of last month on the Dual-Purpose cow with particular reference to the Red Polls, I thought your readers might be interested in a brief account of a visit to the finest herd of Red Polls in the United States.

Last August, after visiting some herds of Red Polls in Ohio, among which were some beautiful cattle, I turned my face towards Wisconsin. I had long heard of the uniform Red Poll cows, selected through years of careful study by that leading advocate of Red Polls, J. W. Martin. On enquiry I learned that Richland City was not a railroad station, so bought my ticket to Gotham. What a charming trip that was from Chicago to Gotham that fresh, bracing morning! I had just the day before left the dusty air and burnt fields of drought stricken Ohio and now I was speeding through green fields set here and there with silvery, shining gems of lakes. After getting beyond the crowded dairy section close to Chicago, cattle, sheep and hogs of the best types were seen at and around the comely farm houses marked in the distance by the flying wheels of windmills. If the vanes of these mills were painted red, white and blue, every farmhouse in Wisconsin would be flying the national colors.

Well, the conductor too soon calls out Gotham. Looking out of the car window I see the big letters staring me in the face. I begin to wonder how far I will have to drive into the country to Richland City. I become the more anxious as rain begins to fall in torrents. When I reach the platform, I walk to the other end of the building, where I see a group of men. I ask how far it is to Richland City. An old farmer in yellow breeches and one leather "gallus" says, "You're right here at it," pointing with a wide

smile to the front of the building. I look up to see Richland City on this end in letters just as big as Gotham was on the other. I had heard of cities straddling two States, but this is the first building I ever saw straddling two towns. I think when you are in the depot in Gotham, you have to go outside and walk fifty yards to enter the postoffice in Richland City.

I found Mr. Martin's son-in-law, who had just become so that day, waiting to drive me out to the farm. I had just by chance struck the Martin farm on a wedding day, so I had plenty to interest me right in the house. It was growing late, so we spent the rest of the evening in the house, while it rained just hard enough outside to make it feel cosy inside. After the young people had retired, I sat until a very late hour enjoying Mr. Martin's stories about famous Red Polls. I guess no one could tell more interesting Red Poll history than Mr. Martin. He has given up his life to the study and care of these cattle. It was beautiful the next day to see how his cattle loved him.

The next morning we were off bright and early to see the cattle. First, we visited the bull barn, where we found "Corporal" and "Ray," the herd bulls. Corporal had scented us, and long before we reached the barn he was roaring like thunder. He is the boss of the place, Mr. Martin excepted, and he thinks he has a right to object to strangers. I think I never saw such a muscular animal. The muscles on his shoulders and thighs stand out like great pillars. He is purposely kept in rather thin flesh and looks not quite so smooth as some and shows a rather high tail bone, but he has a body of wonderful rotundity and a girth that is remarkable for a bull of his size. He has proved himself a great sire and Mr. Martin is perfectly willing to keep him, as long as he lives, at the head of his herd. This speaks volumes for Corporal. Ray is a bull of deep, broad body; wonderful scale and is very smooth. He has none of the spirit and power of Corporal and shows a sluggish disposition.

We were then off across the blue grass pastures to see the wonderful cow herd. I never saw such growthy, luscious blue grass. It made our West Virginia blue grass look tame. This had had the advantage of a wonderful season.

When we topped the hill and looked down across the rolling pastures on that herd of cows, I thought that such a sight could not anywhere in this country compare with it. The two things that impressed me about this herd was the surpassing beauty of the individual cows and the striking uniformity of the herd. In Ohio I missed uniformity. It seemed that the

breeders had all sorts of type. No man knew just what he was breeding for. Mr. Martin had one kind and to say that it is the good kind would be putting it lightly. Mr. Martin, with rare exceptions, will



not keep a Red Poll in his herd that shows no milking qualities. I was surprised to see a few poor milkers, after I had learned his plan of breeding Red Polls. I guess he has secrets in his business that some of us can't learn. The type of cow there is simply the ideal. These Red Poll cows have the milking powers of the dairy cows with none of their roughness and none of the peculiar features of the dairy type that would strike the attention of the ordinary observer. They have wonderful udders, are large and comely and are the most beautiful of all cows in color. In one pasture, where Mr. Martin had about sixty head of cows I noticed that with the exception of three, the cows were of a dark red color with no spot of white save the brush of the tail. The color was very uniform. Most of them were a very dark red and some were a lovely cherry red. All were much alike in type and color. The three mentioned as exceptions were much lighter and spoiled somewhat the uniformity of the herd. I question very much if one could see such wonderful cows anywhere in America. You might find some herds that show more beef and are more perfect in form, but when you consider all that makes a useful, profitable cow and throw in individual beauty, I venture to say that Mr. Martin's herd will carry off the sweepstakes.

You would like to know about the performance of these Red Poll cows. I have only to refer you to the records of the International last year and this year, where cows from this very herd have shown the phenomenal records that establish beyond a doubt their claim as the most profitable farmer's cow. Last year a Shorthorn cow pushed up to second place in the

farmer's class, but was led by Beatrice, a Red Poll, whose record showed 337.8 pounds butter fat in 330 days and her calf at ten months weighed 710 pounds. This calf I saw last summer and I thought him as good as most shorthorns. He was pronounced better than the shorthorn steer from the cow that stood next to Beatrice. This Red Poll steer was shown at Chicago this year, but was placed second in his class, showing that he was not best among Red Polls.

This year Mr. Martin's cow, Duchess of Wisconsin, as pretty a cow as a man could want to own, shows the following great record: 9,960 pounds of milk in 315 days, 444.15 pounds of butter for same time, her calf at 315 days weighed 790 pounds. The cow that stood next to her was a Red Poll and it seems that no breed is able to dispute the right of the Red Poll to be called the true Farmer's Cow. A visit to this Red Poll Farm will answer the charge generally laid at their door, that they lack uniformity and they don't combine milk and beef in same individuals.

H. B. ARBUCKLE.

Maxwelton, W. Va.

WINTERING OF RAMS.

Editor Southern Planter:

More mistakes are made in the feeding and handling of rams during the winter season than in the feeding and handling of any other kind of live stock. On account of the hard service through which rams must pass in the fall months, when they are necessarily prevented from grazing regularly, they come up to the winter in a run down condition. Not in the same degree is this true of any other males on the farm. When a ram once starts down hill you won't have to push him to keep him going. If you let him alone and do nothing to stop him, he will surely go all the way down.

Then, the first thing I would suggest would be the early feeding of rams. During the latter portion of the breeding season they should be removed from the ewes in the daytime and be given a liberal diet of oats. You say this is too much trouble. Well, it is trouble that pays big. This grain ration should be kept up right through the winter, but varied a little from oats to bran, then from bran to mixture of oats and bran, then from this mixture to mixture of bran and corn, then back again to oats and so on, so as to give some variety in the feed. Never feed an exclusive corn ration to rams. This matter of changing grain feed is more important than most persons think. How would you like to have corn dodgers set before you for three meals a day through two or three

months? Corn dodgers and milk would come very near furnishing you a balanced diet, but you can't make me believe you would thrive on it. In December you must begin feeding roots or cabbage once a day to your rams. Cabbage is excellent feed. Oil meal should be added occasionally to the grain ration. This is their butter and if you would follow your own tastes you would give them just a little at every meal, but very little. For roughage, clover hay and bright corn fodder can't be beaten. Cowpeas are fine for sheep, but unfortunately few farmers have this form of roughage.

If rams are fed this way they will come through the winter not poor and haggard, looking seedy and worthless, as most farmers' rams look, but will be muscular, active, and in fine spirits. They will get better lambs for you the next fall and will pay you well for your trouble.

Now, I have two more matters to bring to your attention. First, the importance of feeding rams separately. No sheep are as apt to be fastidious and irregular about eating as rams in the early winter. It seems that they are turned upside down by their fall service, are fretful, inclined to fight, and in every way not suited to regular feeding. You often find a ram that won't touch grain for two or three days. If rams are fed in the same trough, it will be very easy for the hungry ones to push these dispirited fellows aside and then the best eaters will get too much, while the others get none.

This led us at Edgewood Farm to construct a special ram shed, the plan of which I could draw for you, but suffice it to say here that it has the feed trough through the centre and has small stalls twenty inches wide on one side of the trough. Each stall has a light door which falls down behind the rams as they enter. These doors can very easily be worked by the feeder who stands in front of the trough. Thus each ram can go to his stall and be fed as the shepherd thinks best. This enables one to distribute feed according to the individual tastes of his rams. It is best within certain limits to feed a sheep or any animal the food it prefers. After the grain ration the rams are allowed to come around to the hay racks.

The other matter was about fighting rams, but I will defer this to another time.

Maxwelton, W. Va.

H. B. ARBUCKLE.

BERKSHIRES AT THE CHICAGO INTERNATIONAL.

THE FAT BARROW AND BACON CLASSES.

At the Chicago International Live Stock Exposition (undoubtedly the greatest exhibit of fat stock in the world) the entries of pure bred hogs in the breed-

ers classes have been very light during the last two years, as in spite of every precaution taken by the management there is too much danger from cholera for a breeder to risk first class stock. It is therefore very gratifying to see each year more interest in the classes for fat barrows, carload-lots, and bacon hogs of any breed.

At the show just closed this month the Berkshires made a great record. The champion pen of fat barrows any age and weight was won by Berkshires shown by the Iowa Agricultural College. The pen of fat barrows of export bacon type was won by the Minnesota Experiment Station, both first and second prizes going to their exhibits of the Berkshire breed. The carload lot was not awarded to the Berkshires, but among the exhibits a lot of Berkshires averaging 210 pounds at 7 months old sold at an average of \$4.90 per ewt. (5c. higher than the champion lot.)

It is interesting to note in connection with this that at the Birmingham (England) Fat Stock Show, just closed, both first and second prizes for the best pen of pigs went to Berkshires. At the Edinburgh (Scotland) Fat Stock Show this December the champion pen was also of Berkshires. London Fat Stock Show has not yet been heard from.

The demands of the packer and the feeder must always be the foundation of the breeders efforts, and the results of this open competition in the fat and bacon classes should always be watched with interest and are bound to furnish valuable food for thought.

SALE OF HEREFORDS.

Messrs. Giltner Bros., of Eminence, Ky., who are advertising a sale of Herefords in our columns, report that the second car of Hereford cattle shipped to

Auburn arrived safely and are now being inoculated for the sale. This gives sixty registered animals and ten high grades for the sale. All are doing well and have fully developed

ticks on them which is the final test of inoculation.

In this sale are included about ten of the best Aerobat heifers in calf to Imported Britisher, champion bull of England and America. This Aerobat-Britisher cross represents the blending of the blood

of two of the greatest bulls that ever lived and should produce something wonderful for "Like produces like."

The catalogs will be out about January 1st and Messrs. Giltner will be glad to send it all inquirers. In this catalog they have given a short history of Herefords and should think with its handsome illustrations that it would prove of interest to all.

Southerners wanting to buy the best blood of the North will find this an unexcelled opportunity to get the best with the danger from tick fever eliminated.

Sale date is February 17, 1904.

DAIRY WISDOM.

Raise the calves by hand and substitute vegetable fat in the form of ground flax-seed jelly, and later corn meal, etc., in connection with skim milk, for the butter fat in the whole milk.

Know which cow is not earning her feed and dispose of her.

Brush with a brush or wipe with a damp cloth the udder and flank before milking. Twenty to 30 times as much dirt falls in the milk from the unbrushed, unwashed udder as from the washed one.

Milk with dry hands.

Don't allow the milk to stand in the barn.

Don't use a so-called dilution separator; set a can of milk into cold water, but don't mix water and milk. An eighth to a third of the butter fat is often lost by diluting the milk with water.

Don't mix sweet and sour cream less than 12 hours before churning.

Own and use a dairy thermometer—cost 25 to 50 cents—it will save many times its cost, if it is used and the cream is churned at the right temperature. They may be had from any dairy supply house and very often from the local druggist. They should be all glass. The cheaper ones are not always accurate and should therefore be compared with a reliable one.

Salt by weight or measure—not by guess.

Wash the butter milk out.

Don't overwork the butter; it injures the texture.

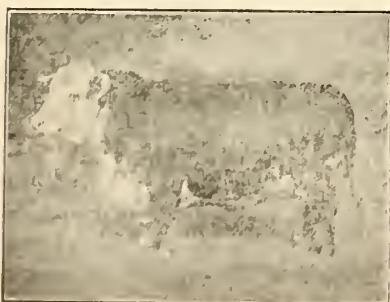
Have a butter worker; it saves labor and helps quality.

Put butter in rectangular prints, (they are more attractive and pack better).

Use parchment paper, not wax paper.

Use dairy salt; not table or cheap barrel salt.—Bulletin Ind. Exp. Sta.

Remember to sign all communications intended for publication with your own name and address, not necessarily for publication if not desired, but as evidence to us of good faith.



The Poultry Yard.

BUFF ORPINGTONS.

Editor Southern Planter:

Among the new breeds of poultry none has come so rapidly to the front as Orpingtons. Up to two years ago they were hardly known, and not then admitted to the standard. They can now be found in almost every county, and if their good qualities were more widely known, they would rapidly take the place of the older and more common breeds. They are a combination of three breeds—Dorking, Hamburg and Buff Cochin—and carry more good points than any one of these. They originated in England, where, up to four years ago, they were raised exclusively. America took up the breed, and is now taking the blue ribbon at all shows over the English breeders.

The Buff Orpington has clean, pink legs, a beautiful golden buff plumaage, and carry themselves in royal style. They are the finest winter layers, broilers, grow rapidly, and the dressed Orpington, young or old, is surpassed by no fowl for table use. The hens make the very best of mothers, and are not persistent sitters. Hens weigh 6 to 8 pounds; males, 9 to 11.

They do well in pens, and show themselves contented even in close quarters. In the Australian egg laying contest, where 40 pens of pullets contested, Orpingtons showed their superiority for egg profit by winning over all competitors, and the older breeds, under exactly same conditions, fell short from 30 to 33½ per cent. Andalusians and Minorcas came last, with Leghorns and Wyandottes close to them. Farmers and poultry men generally would do well to look up this excellent breed, and bear in mind that profit here is worth the time spent in investigation. The writer of this has been raising Buff Orpingtons three years, and can find no fault with them. He has no stock for sale.

F. C.

Mecklenburg Co., Va.

CO-OPERATIVE EXPERIMENTS IN THE COST OF PRODUCING EGGS.

In a former issue we published the results of a series of experiments made in 1901-1902 in New York State, under the supervision of the Experiment Station at Cornell, in the cost of producing eggs on a large scale, with the average flocks of poultry kept by farmers in that State. These experiments were continued during 1902-1903, and we have now received

a report on these later trials. Commenting on the whole experiment, the Director of the Experiment Station says:

In the first series of records, 1901-1902, more than 2,100 egg-laying fowls were under test, in the second, 1902-1903, more than 3,100, making altogether upwards of 5,200 birds that have been carefully watched and their performance recorded. These records are primarily of interest to the poultryman, although the general conclusions should appeal to the entire agricultural community.

A most instructive feature of these records is the immense range in the cost of producing eggs—a range that runs practically from six cents to six dollars the dozen. On examination, it is found that this remarkable range is not correlated closely with breed, character of building, or kind and quantity of food, although all these factors have an influence. One cause of this difference seems to be a difference in the hens themselves—some hens are good layers and some poor layers, as some apple trees are good bearers and some poor bearers. What the reason is for this difference in what we call individuality, we do not know; but it is probable that individual fowls may stamp their capabilities on their progeny as markedly as individual cows may transmit good or bad milking qualities. At all events, it is not sufficient that the poultryman pay attention to housing and feeding alone. He must also give attention to breeding, choosing hatching eggs from parents of known performance. This subject is now to be investigated.

The summary shows that with all the 5,200 fowls, the average daily production during thirty-four weeks was one egg to nearly five birds. The average cost of all the eggs (151,615 in number) was about one and one-half cents each.

In the seventeen weeks from December 1, 1901, to March 29, 1902, and in the similar period of 1902-1903, in 29 flocks representing ten owners and 5,200 fowls, the average daily production of eggs was 22.8 per 100 fowls.

During the same period the average food cost of one dozen eggs was nearly eighteen (.177) cents. The flocks that laid most eggs during December and January laid most eggs also in March.

The egg production of pullets was notably in excess of that of hens particularly in the earlier periods when the price of eggs was highest.

The average cost of feeding 100 hens for 17 weeks was \$35.33.

The average value of product exceeded the cost of food by \$16.13 per 100 fowls.

The Horse.

NOTES.

The racing season of 1903 was a most successful one, and the attendance at the Metropolitan track surpassed that of any year in turf history. A number of good horses were brought into prominence, among them being Waterboy, McChesney, Hermis, Africander, Hamburg Belle, Irish Lad, Dick Welles, and others. The cross country performers were also well represented. The latter division was headed by the Virginia bred horse, Land of Clover, a bay gelding, foaled 1897 and sired by Flatlands, dam Lucky Clover, by Bersan, a product of the Fort Chiswell stud of J. H. McGavock, Max Meadows, where the sire and dam are owned. Land of Clover earned the title of our champion steeplechaser by winning the great \$10,000 steeplechase at Morris Park, New York, last October, when, with 167 pounds on his back, he defeated the best horses in training, among them the well-known performer, Self Protection, winner of this event in 1902, and who was once regarded as a likely candidate for English Grand National honors. The son of Flatlands is credited with winning \$16,000, his nearest competitor being the California bred horse, Lavator. Among other Virginia bred horses that were good enough to win on the big tracks were Imperialist, Charawind, Eoprone, Ed. Adack, Paul Aker and Arius.

* * *

Kelly, 2:27, son of Electioneer, and famous thoroughbred Esther, dam of four in list, by Express, will be in the stud of W. J. Carter during the season of 1904 at Richmond, Va., and indications are that some of the best mares in the State will be sent to the court of the elegant bay stallion. Kelly himself could show two minute speed at the trot, and his full sister, Expressive, 2:12 $\frac{1}{2}$, was the greatest three year old trotter and race winner the world has ever seen. But few of the get of this blood-like, handsome son of Electioneer have been trained, but all of them have speed, good looks and level heads. He has sired McChesney, 2:16 $\frac{3}{4}$, and other winners. Kelly will stand at the moderate fee of \$25, and approved mares of rich breeding are being booked to him.

* * *

The bay colt, Genteel, three years old, by Gambetta Wilkes, 2:19 $\frac{1}{4}$, dam Lena, by Manbrino Startle, is doing well in the stable of his owner, M. B. Hickson, of Lynchburg, Va. He is a full brother to the fast mare, Naretta, 2:24 $\frac{1}{2}$. Last season, in his two year old form, Mr. Hickson drove this colt a mile to cart over the half mile track at Lynchburg in 2:39 $\frac{1}{2}$. Genteel will be bred to a few mares in the spring, and then go regularly into training again. His sire,

Gambetta Wilkes, ranks as the leading sire of standard performers for 1902, as twenty-six of his get entered the list. Another distinction and a much greater one, too, I think, is that Gambetta Wilkes is now the leading sire of 2:10 performers, having 12 of his sons and daughters in that select coterie.

* * *

Wealth, 2:10, the handsome brown stallion, by Gambetta Wilkes, 2:19 $\frac{1}{4}$, out of Magnolia, by Norfolk, is in winter quarters at the farm of his owner, Col. W. H. Chapman, near Gordonsville, Va., and doing finely. The fast son of Gambetta Wilkes was shipped home after the close of the Memphis meeting last fall and it is Col. Chapman's intention to retire him permanently to the stud. Wealth paced to his record at Memphis under adverse conditions and finished well up in heats that were faster than his record in a race. Wealth was bred by General Julian S. Carr, of Durham, N. C., who owned the dam, Magnolia, and bred her to Kremlin, 2:07 $\frac{3}{4}$ and other sires in addition to Gambetta Wilkes.

* * *

The Charlottesville Hunt Club was recently organized at Charlottesville, Va., and starts out with good prospects. Application has been made to the State Corporation Commission for a charter. Several successful hunts have been held by this club and keen, exhilarating sport was furnished those who followed the hounds. The officers elected for the first year are as follows: President, Col. Henry M. Lewis; Vice-President, Willson Chamberlain; Secretary and Treasurer, Joel M. Cochran; M. F. H., William Garth. These gentlemen along with J. A. Chisholm, Charles H. Moore and George B. Goodyear, constitute the Board of Governors.

* * *

The thoroughbred stallion Cherrywood, full brother to Morello, owned by Harry C. Beattie at Bloomingdale Farm, has developed into a stoutly made, handsome horse and is likely to sire race horses if given a chance in the stud. Mr. Beattie thinks of sending the brown son of Eolus and Cerise to Kentucky for the season of 1904 in order that better opportunities may be accorded him than are likely to be obtained in this section.

* * *

Mr. Samuel, one of the largest real estate owners in Virginia and a breeder of fine horses and fancy cattle at Oak Hill Farm, Wenona, Pittsylvania county, has recently purchased and added to his stud the thoroughbred mare Wanda. She has a nice yearling by imp. Potentate and is again in foal to him.

BROAD ROCK.

Miscellaneous.

Something Badly Needed in the Country at Large— To-wit, Local Dealers in (Unmixed) Agricultural Chemicals.

Editor Southern Planter:

Do we live in an age of progress, or do we not? Are chemical fertilizers a necessity to be employed by the many, or simply a luxury to be enjoyed by the few? If they are an actual necessity, and we fully believe that in thousands of instances they are, why not place them within reasonably easy reach of those they are calculated to benefit? After an extended tour of the rural districts of almost the entire South, and conversations innumerable with hundreds of the most progressive, up-to-date and wide-awake farmers and planters of this section, we have no hesitation in making the assertion that enormous as the sale of commercial fertilizers, in the aggregate, may now appear to be, the amount sold would easily be doubled, trebled or even quadrupled, if the soil tillers of this broad land could but get what they needed and wanted, and at the time they needed and wanted it. The terms nitrogen, potash and phosphoric acid have, to all truly progressive farmers, become as familiar as household words; they know what they are, whence derived, and what they are good for; but, unfortunately for them, and unlike any and every other article of commerce, when the farmer undertakes their purchase he finds so many obstructions and restrictions thrown in his way that he has to either give it up in disgust or buy something he neither wants nor needs. For quite a number of years the farmers of the interior have been acquainted with the fact that when purchasing any of the salts of potash, it could be purchased in the form of muriate cheaper than it could in any other form, this latter agent containing at least one-half its weight, or 50 per cent. pure potash; they are also acquainted with the fact that kainit contains but 12 per cent., or just 12 pounds of pure potash in each 100 pounds, and that in paying the freight on same from the seaboard to the interior they are paying freight on 88 pounds of comparatively useless material in each 100, or 1.760 pounds in each ton; we say, they know this, and they know likewise that they cannot afford it; but what are they going to do about it? How are they going to help themselves? 'Tis true the dealer quotes muriate of potash as for sale among his other wares, but what matters his quoting it if he has not got it, and tries to put one off with some complete mixture of his own make? Why is this? Are the profits greater on his mixture than on the muriate? Whatever be the reason, the fact remains the same, the complete fertilizer with little potash is omnipresent,

while the muriate is invariably conspicuous for its absence. So, also, the sulphate, which, by the way, has proven superior and given better and more immediately beneficial results with us than has even the muriate, is actually scarcer and harder to come at than is the muriate.

There are probably some of our readers who think, and with some show of reason on their side, too, that "fertilizers don't pay," and that "there is too much of them used already," to both of which assertions we are both ready and willing to subscribe a hearty "Amen." "Fertilizers don't pay" when used blindly, ignorantly, indiscriminately and without either discretion or judgment; and as there is quite a large amount annually used in this manner, to that extent it were better for the country, better for the user, and even better for the manufacturer, if less instead of more had been used. But, while this is true, it is also true that, judiciously used, they are one of the sources of greatest profit to the user thereof, and within reasonable bounds, the more one can use to advantage the greater the profit accruing therefrom. Many farmers purchase a low grade fertilizer because it can be obtained at a comparatively low price per ton, but the fact should be borne in mind that low ton prices mean either low content of good forms of plant food or the use of poorer forms. Fertilizer, high grade both in quality and quantity of plant food, cannot be purchased at a low price per ton. In purchasing low grade goods one is paying freight on a mass of useless material. Not only is there a loss from this cause, but homeopathic doses of a low grade fertilizer merely act as a stimulant, forcing the crops to an overgrowth, hence resulting in a more speedy impoverishment of the soil than would have been the case had no fertilizers been employed. Many dealers handle those brands, and only those that give them the greatest immediate profit, utterly regardless of their adaptability to the soil or crops of that immediate section, and even after they are purchased by the soil tiller, they are in far too many instances applied to all crops and all soils alike. It is needless for us to say that where their employment proves profitable under these circumstances it is merely the result of accident, and not of good judgment. On our small farm of but 220 acres we have five or more distinct classes of soil, each demanding different combinations of fertilizing agents, widely different forms, too, for best results, as well as widely varying quantities, and this regardless of crops to be grown thereon. No scientist, much less a fertilizer manufacturer, 1,000 or even 500 or 250 or 100 miles from here, could possibly devise a formula that would suit

our farm. No two or three, or even four, formulas would answer. What folly, then, it would be to limit one's self to one; and how much better it would be, how much more sensible and business-like to get the ingredients at first hand, at first cost, and mix at home a fertilizer adapted to the soil to which it is to be applied, and also to the needs of the special crop to be grown thereon. We are far from opposing the fertilizer manufacturer or "mixer," their facilities for mixing are undoubtedly better than can be found on the ordinary farm; but it does look to us that unless they exact from their customers exorbitant charges for this self same mixing, it would be just as profitable for them to sell the unmixed goods. The extra profit is bound to be in the mixing, or in the substitution of poorer forms of plant food; if the former, the farmer can do as well, if not better (for reasons given above), himself; while, if the latter, as "the best is none too good," we would favor boycotting the manufacturer. Frauds of that description are of altogether too common occurrence, as evidenced by the fertilizer inspection bulletins of the various States. Take the State of North Carolina, for instance. In 1898, "of 823 brands registered in the State, 531 of which were analyzed, one out of every four and one-fifth of the whole number analyzed fell below its guarantee in some ingredient. Of the superphosphates with potash, one brand in every seven and one-half fell below guarantee in available phosphoric acid; one in every four and one-half in potash, and one in nearly every three in available phosphoric acid and potash."

Of the so-called "complete" fertilizers, one in every nine and a fraction fell below guarantee in available phosphoric acid; one in nearly every twelve in ammonia; one in every ten and one-third in potash; and one in about three and one-half in either available phosphoric acid, ammonia or potash."

It would be a very unskilful workman who could not have done as well or better, and with no better implements than shovel and hoe on a tight barn floor. But by far the major portion of these brands fell off in valuation, yet the farmers of the State footed the bill, cheerfully, we suppose, because ignorantly. In this instance, at least "ignorance was bliss." We may be 25 or 50 or 100 years ahead of the progressive age in which we live, but sooner or later the time is bound to come when the American farmer will assert himself and purchase his phosphoric acid or potash and even nitrogen, when needed, at his own county seat, the same as he now purchases his soda, sugar and coffee. What is to hinder? Each separate article entering into the composition of a commercial fertilizer is already an article of commerce, and has a certain definite value as such. The trade in them should be unrestricted, as free for one as for another.

G. H. TURNER.

Burgess, Miss.

MILK PRODUCTION OF BREEDS COMPARED.

In a recent visit to England the writer had the pleasure of seeing some of the grand cattle on the estate of Lord Rothschild at Tring Park near London. This estate while conducted at a profit as an investment also carries on some work of an experimental nature.

Three herds of pure-bred cattle, Jersey, Red Poll and Shorthorn, are maintained in a comparison of the three breeds in the production of milk. The milk is sold at wholesale in London, bringing 15 cents per gallon in summer and 20 cents in winter. The handling and feeding of the herds are very similar. The usual custom is to feed three pounds of cake per head in the summer on grass and five pounds in the winter with mangels and hay. The yields of milk for the three herds for last year were as follows:

31 Jerseys averaged 6,304 pounds per head.

41 Red Polls averaged 6,383 pounds per head.

25 Shorthorns averaged 6,833 pounds per head.

The best individual record in each herd was:

Joyful, Jersey, 9,865 pounds; Rosette, Red Poll, 10,392 pounds; Reverend 4th, Shorthorn, 10,573 pounds. Selecting the best records, five Jerseys gave 45,307, five Red Polls 48,022 and five Shorthorns 49,145 pounds of milk. Ten Jerseys gave 82,044, 10 Red Polls 87,419 and 10 Shorthorns 87,769 pounds of milk.

These figures cover the 12 months and include the periods of varying length when the animals were dry.

The individual records of some of the cows covering several years are no less interesting. Among the Jerseys Sultane 14th averaged for eight years 9,122 pounds of milk and Fleurie for four years 8,763 pounds. Of the Red Polls Rosette averaged for nine years 9,925 pounds of milk and Faith for six years 9,292 pounds. With the Shorthorns Reverend 4th averaged during five years 9,708 pounds of milk and Lady Rosedale during four years 8,981 pounds.

The milk from these herds is sold at a uniform price regardless of the fat per cent., and unfortunately no estimates are obtainable of the butter yield. It is fair to assume, however, that for butter-making the Jersey milk should obtain a credit for a higher percentage yield. The bull calves from the Jersey herd not sold for breeding purposes were vealed while those of the Red Poll and Shorthorn herds were reared and fattened as steers. On this score a credit should be added to the two latter breeds.

The foregoing results would indicate that the profit of a milking breed depends to some extent on the market for more than one product of the herd.

D. W. MAY.

Kentucky Experiment Station.

—*Breeders Gazette.*

THE BROWNLOW GOOD ROADS BILL.

AN INCENTIVE TO LOCAL ACTION.

Interests of the Government Well Guarded.

One objection that has been urged against the appropriation of money by the government to aid in road building is that the members of Congress would engage in such turmoil and unseemly strifes as are now witnessed in securing appropriations for rivers and harbors. This could not be the case under the Brownlow bill, for it provides that no State shall receive in aid of road construction out of any money appropriated for that purpose a greater proportion of the total amount appropriated than its population bears to the total population of the United States. To illustrate: If \$20,000,000 should be appropriated, Massachusetts would receive, approximately, \$735,000; Alabama, \$497,000; Tennessee, \$524,000; Michigan, \$634,000, and Maryland, \$311,000.

However much work may be done by either of these States, it could not receive more than its proportion of the amount appropriated. Nor could any community in the several States complain of another for trying to secure the premium offered by the government in taking prompt and effective action in raising local funds to meet the requirements of the government. It would be a contest not between States, but between different counties of the same State, or between different sub-divisions or townships, but the bill makes it impossible that there could be contests between the States themselves.

This bill is well guarded also as to the expenditure of the money appropriated by the government. Application must first be made by the officers having jurisdiction of the public roads in any State or county or district to the director of the bureau of public roads for co-operation in the construction of a public highway. After the application is made with the required resolution, the director of the bureau of public roads must have the route investigated to determine whether such a proposed road would be of sufficient importance to receive national aid. If it should be approved by the director upon investigation, then maps are to be prepared, plans and specifications made, the width of the road determined, together with an estimate of its cost.

A second application, with resolution, is then made by the local authorities and filed with the director, in which assurance is given that such road or a section thereof shall be constructed according to the provisions of the act. The director then advertises for bids for the construction of the road, and the contract is awarded to the lowest responsible bidder, or it may be awarded to the State or county or subdivision. The director may then issue his warrant

on the Treasurer of the United States, but his warrant shall not be in excess of 80 per cent. of the work performed, and in all cases the government shall hold back 20 per cent. until the entire work has been finished.

To any one who will study closely the provisions of the Brownlow bill it will be apparent that the interests of the government have been well protected in every particular. The value of the bill is the beneficial influence it will exert upon local action. Experience has shown that something is necessary to stimulate local effort in the matter of road building. The history of the construction of roads in all European countries shows that no good, permanent free roads have ever been built by local assessments or taxation.

We would strongly urge that petitions should be got up and sent to the Senators and Congressmen of the South urging the passing of the Brownlow bill, and these should be followed up by letters to those gentlemen asking them to vote for the bill and work for its passage.—Ep.

SPRAYS FOR SAN JOSE SCALE.

The control of this insect in orchards is a problem of considerable importance to many fruit growers in this State. It not only interests those who are unfortunate enough to have the scale already established on their trees, but also others who are more or less exposed to danger of infestation. We have been conducting a series of experiments the past summer for the purpose of determining by practical tests the relative value of different methods of preparing a lime-sulphur wash, and we have also endeavored to test the efficacy of prolonged boiling, the value of salt in the wash and other modifications. We have had most excellent results in using a lime-sulphur wash consisting of 25 pounds of lime and 20 pounds of sulphur to 60 gallons of water. The lime added, a sufficient quantity of water is brought nearly to a boil in a kettle, and while the slaking is in operation the sulphur is put in and the whole well stirred, in order to take advantage of the heat generated by the slaking lime. This assists materially in bringing the sulphur into solution, and we then find it necessary to boil the combination but 30 minutes.

Our experiments indicate that a wash prepared in this way gives exactly as good results as though different proportions of lime and sulphur were used, salt added, or the boiling prolonged for 1½ or 2 hours, as is usually insisted upon in most formulas. The beneficial results obtained last spring from the applications of this wash cannot be doubted, since the treated trees were almost free from the pest, while untreated ones became nearly covered with scale before the end of the season. This was true not only of different

trees, but also of sprayed and unsprayed halves of the same tree. It certainly looks as though this combination could be relied on to do good work in a great many cases, and while it is a troublesome mixture to prepare and an extremely disagreeable one to apply, it has the advantage of being cheap and can be made by almost any one. It is also less dangerous to the trees, in our opinion, than the 20 per cent. mechanical crude oil emulsion.

This latter has also given good results in the Hudson River Valley, and I advise growers to reject neither, but test both if they care to do so. The oil, I believe to be slightly injurious to the trees; yet, after four years of successive application to various pear and peach trees, I have been unable to detect any very marked injury which could be attributed to it. I have, however, observed enlargement of the lenticels, followed by a distinct roughening and thickening of the bark, and I presume that this is injurious to some extent, yet I am unprepared to say what the outcome will be.

It should be added that a whale oil soap solution, even $1\frac{1}{4}$ pounds to a gallon, if applied very thoroughly, will give most excellent results in the southern part of the State, at least. I have examined a large number of trees where a thorough application of this material was made, and the results were very gratifying, practically all being relatively free from the pest, though here and there was to be found a tree which was somewhat more infested. A comparative test between this material and the lime-sulphur wash mentioned above, leads me to believe that, under weather conditions as they were last spring, the lime-sulphur wash was decidedly more beneficial than the soap application.

In conclusion the importance of thoroughness in treatment should be emphasized very strongly; in fact, I advise at least three parts application to one part insecticide. The method of spraying cannot be watched too closely.

E. P. FEIT.

New York State Entomologist.

CORN PREMIUMS.

Editor Southern Planter, Richmond, Va.:

Dear Sir,—As a number of inquiries have been received at this office as to when the corn premiums will be awarded, and when shipments are to be made in competition for these prizes, I take the liberty of saying through your paper that we are in a position to receive this corn whenever it is convenient for the grower to ship, and the earlier it is received the better. To give all sections of the State equal opportunities, the contest will not be closed before February 1, 1904.

Yours very truly,

G. E. MURRELL, Supt.

Louisiana Expo. Com.

Richmond, Va.

GRASS CROP REPORT.

Below please find report of my second and third grass crop together with a total crop for this year as compared with the crop of 1902. My total second crop, 1903, from $1\frac{1}{4}$ acres was 66,212 pounds; $3\frac{1}{2}$ acres, not well cultivated, produced only 2,100 pounds, 600 pounds per acre; $2\frac{3}{4}$ acres, not well cultivated, produced only 18,900 pounds, 671 pounds per acre; $\frac{1}{8}$ acre not well cultivated produced only 6,518 pounds, 7,732 pounds per acre; the balance, $7\frac{1}{4}$ acres, produced only 38,690 pounds, 5,338 pounds to the acre:

First crop, 1903, was..... 110,729 lbs.

Second crop, 1903, was..... 66,211 lbs.

Third crop, 1903, was..... 1,750 lbs.

Total 1st, 2d and 3d crops..... 178,690 lbs.

Average 12,718 pounds, which was an average of 951 pounds per acre more than 1902 crop, which was 164,794 pounds, average per acre of 11,268 pounds.

The total crop from $\frac{1}{8}$ of an acre in 14 years, first and second crop, one seeding, 114 tons, 428 pounds. The surface of this field to start with had but little, if any, vegetable matter upon it, nothing but clay, gravel hard pan. First it was intensely cultivated, nothing but bone, potash and nitrate of soda has been used from the start as fertilizer, at a total cost not exceeding \$250 in the fourteen years, or less than \$2.25 per ton of hay gathered. The seeding was 14 quarts of timothy and 14 quarts of recleaned Red Top per acre. The crop this year has the same relative amount of timothy and red top as when originally sown. Some of it will be shown at the St. Louis Fair next year. There will also be shown samples from other parts of my grass field. The most remarkable sample will be shown from a quarter acre section, where the first crop cut this year was over four feet in height and weighed 2,471 pounds. Second crop cut this year was over three feet in height, weighed 2,240 pounds, making $7\frac{1}{2}$ in height. Each crop was fully headed and blossomed. The third crop did not blossom, but weighed 750 pounds, or at the rate of $3\frac{1}{2}$ tons to the acre. The total weight of the three crops from this quarter acre was 6,401 pounds, or at the rate 25,644 pounds per acre; fertilizer cost less than \$2 per ton.

Blizzard struck 8 acres of my second crop while drying and lifted tons of it into the adjoining forest; except for that I certainly should have had 40 or more tons instead of the 33 tons which I secured.

I have a hay press never used before this year but once. This year I found it necessary to press my first crop to get the second crop in the barn, which is 60x60x30 feet up to plate.—GEORGE M. CLARK, in *Southern Fruit Grower*.

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A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

Mention THE SOUTHERN PLANTER when corresponding with advertisers.

PUBLISHER'S NOTES.

TO ADVERTISERS.

All advertisements and matter pertaining to advertising must reach us by the 25th of each month. Please bear this in mind.

This Issue.

With this number, we begin our journey to the 65th mile post. No other agricultural journal has lived so long a time, some claims to the contrary nevertheless. Considering the number which have started and fallen by the way-side, we congratulate ourselves that we have weathered all storms and appear before the farmers of the South stronger and better than ever. We take it that we have probably deserved success, as mighty few enterprises succeed without first deserving success. Now, we want to get a little more personal and ask our agricultural friends if we do not deserve a somewhat larger measure of success? If so, help us to attain it. You can do this in several ways. Mention THE SOUTHERN PLANTER to your friends; induce them to subscribe at 50 cents a year, if you think it is worth that much. We will save a large number of this special issue with which to start the new subscriptions, which we feel sure you are going to send us. Special offer to clubs.

An Apology.

The pressure upon our columns this month and the necessity for going to press earlier in the month in order to make good the lost time of the Christmas holidays, has compelled us to leave out some sketches and portraits of writers whom we desired to include in our special article, and also some other articles, pictures and engravings which we had hoped to publish. We would ask our friends to bear with us until the February issue appears, when we hope to set ourselves right with them.

Wood's Seeds.

Twenty-five years practical experience, and the fact that we do the largest business in Seeds in the Southern States, enables us to supply every requirement in

GARDEN AND FARM SEEDS

to the very best advantage, both as regards quality and price.

Truckers and Farmers

requiring large quantities of Seeds are requested to write for special prices. If you have not received a copy of WOOD'S SEED BOOK for 1904, write for it. There is not another publication anywhere that approaches it in the useful and practical information that it gives to Southern farmers and gardeners.

Wood's Seed Book will be mailed free on request. Write to-day: do not delay.

T. W. Wood & Sons, Seedsmen,
RICHMOND, - VIRGINIA.



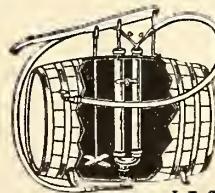
Spraying Tells

Compare photographs of results from sprayed and unsprayed trees. Same orchard, same row, same varieties.

Deming's Sprayers

fit every purpose, from smallest to largest field operations. Hand Pumps, Bucket, Knap-sack, Barrel, Mounted Power Sprayers. Line includes every late discovery that makes for easy, rapid and perfect work. Full line best nozzles, attachments, spraying formulas, etc. Valuable book on insects and plant and fruit diseases 10c. Catalog free.

The Deming Company, Salem, Ohio.
Menton & Hubbell, Western Agents, Chicago, Illinois.

Defender
Sprayer

All brass, easiest work-
ing, most powerful, auto-
matic mixer, expansion
valves, double strainer.
Catalogue of Pumps and
Treatise on Spraying free.

AGENTS WANTED:
J. F. Gaylord, Box 82 Catskill, N. Y.



WANTED.

To send to every town sample of the new "Kant-Klog" Sprayer. First applicant gets wholesale prices and agency. Big money made with sprayers during winter. Full particulars free.

Address Rochester Spray Pump Co.,

21 EAST AVE., ROCHESTER, N. Y.

SURE GUARANTEED CURE FOR GRAN-
ulated Eyes. My remedy will make weak
eyes strong. Write for particulars. Address
L. A. MILLS, Emporia, Kansas.

HOW'S THIS?

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Toledo, O.

We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm.

West & Traux, Wholesale Druggists, Toledo, O.

Walding, Kinnan & Marvin, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Testimonials sent free. Price 75c per bottle. Sold by all druggists.

Hall's Family Pills are the best.

WITH THE ADVERTISERS.

Lee's Prepared Agricultural Lime is advertised in this issue.

Feed Mills are offered by The N. M. Field Mfg. Co. Look up the ad.

The Grove Stock Farm is offering some choice Holstein Bulls.

Some splendid Angora Goats are offered by Mr. M. S. Valentine.

The Cutaway Harrow is advertising its celebrated "Grass Making" tools in another column.

The Lansing Tubular Silo is offered our readers again this season by A. M. D. Holoway.

The Filston Farm has several advertisements in this issue, to which we invite attention. "Filston products are good."

J. M. Thorburn & Co., 102 years in the seed business, have an attractive card on another page.

Buff Orpingtons are coming to the front. They are offered by several parties in this number.

The Virginia Fire and Marine Insurance Company would like to insure your property.

Strawberry plants are offered by our long time advertiser, J. W. Hall.

Woodside Stock Farm has a splendid offering of Berkshire pigs.

Pit games can be had of T. W. Jarman. See his ad.

The Acme Churn, a splendid one, is a candidate for public favor.

M. B. Rowe & Co., of Brompton Farm, have a nice lot of Shorthorns to dispose of. Better look up the ad.

Look up the ad of the Lyons Gap Herefords. Mr. Morgan, the owner, has some choice stock for sale.

Dr. A. C. Daniels would like to send you a copy of his book on home treatment of horses and cattle.

The Progress Farm is a new advertiser in this issue. Farm bred poultry and pedigree corn is the offering.

Kitselman Bros. have 3 ads in this issue. We invite attention to all of them. Farmers interested in good

Feed Your Land

with fertilizers rich in Potash and your crop will crowd your barn. Sow Potash and reap dollars.

A Fertilizer Without

POTASH

Is Not Complete.

Be good to your land and your crop will be good. Plenty of Potash in fertilizers spells quality and quantity in the harvest.

Our Five Free Books

are a complete treatise on fertilizers, written by men who know. They are useful to every man who owns a field and a plow, and who desires to get the most out of them. Your name on a postal will do.

GERMAN KALI WORKS

93 Nassau Street, New York



fences and how to make them will find these ads particularly attractive.

The Foos Mfg. Co. is a new advertiser in this issue. Grinding mills, gasoline engines, etc., are offered.

The famous "Iron Age" Cultivators are offered as usual this season. A very interesting booklet will be sent on application. Look up the ad.

Geo. A. Sweet Nursery Co. has an attractive announcement in another column.

S. L. Allen & Co., of "Planet, Jr." fame, have a seasonable card elsewhere in this number.

The Deming Spray Pump is offered again this season to our readers. Look up the ad and send for catalogue.

The Ohio Carriage Mfg. Co. has a striking ad on another page. Be sure and refer to it.

The Spangler Mfg. Co. is advertising the York Weeder again this season. This is a valuable tool, and should be on every farm.

The International Stock Food Co. advises us that they have just established a factory in Toronto, Canada. Their business has grown so in the Dominion for the past five years that they have found it necessary to establish this branch factory. Mr. E. B. Savage, son of the owner, M. W. Savage, is in charge. We wish this concern another happy and prosperous New Year.

WARROCK-RICHARDSON ALMANACK.

Many New Features Added to This Valuable Publication.

The Warrock-Richardson Almanack this year contains a large amount of important information hitherto not found in that valuable publication. Among the matter is a complete draft of the game laws, the franchise section of the Constitution, the law on wills, a complete postal guide of the State, the last congressional and gubernatorial vote, a list of the Federal officers in the State, postal laws, directory of State institutions and the judiciary, the population of counties and cities, the court and county officers, and other matters of value and interest to people in general.

This year the Almanack comes off the press of Clyde W. Saunders, in whose control it recently passed.

The Almanack can be had from news-dealers or from the Publisher, Clyde W. Saunders, 1116-1118 E. Cary St., Richmond, Va.

Price by mail, 10 cents per copy.

Winter course in agriculture and short course in dairying, lasting ten weeks, January 4-March 10, 1904. Tuition free. Board, room and other expenses thirty dollars. North Carolina College of Agriculture and Mechanic Arts, Raleigh, N. C. Write Prof. Burkett, Raleigh, N. C., for full information.

Mention the SOUTHERN PLANTER in writing.

FOUNDED

1802.

GOLD MEDALS:

Paris, 1900. Pan-American, 1901.

Thorburn's Seeds

for over a hundred years have been universally recognized as the standard of excellence. They received the GOLD MEDAL (the highest award) both at the Paris Exposition of 1900 and at the Pan-American, 1901.

Our Catalogue

— the 103d successive annual edition — contains a more complete assortment and fuller cultural directions than any other seed annual published. It is beautifully illustrated, not with highly colored exaggerations, but with the finest half-tones from life photographs. It contains 144 large size pages, and is in every respect and without exception the most complete, most reliable, and most beautiful of American Garden Annuals. We will mail it FREE.

Market Gardeners

are invited to send for our special price list of high-class vegetable seeds for truckers and large market growers. It contains all sorts of approved merit.

J. M. THORBURN & CO.,

36 Cortlandt St., NEW YORK.

.. ELMWOOD NURSERIES ..

— WE ARE GROWERS AND OFFER A FINE ASSORTMENT OF —

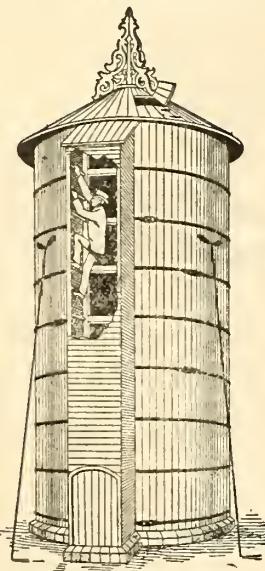
Apples, Peaches, Pears, Cherries, Plums, Apricots, Nectaries, Grapevines in large assortments, **Gooseberries, Currants, Strawberries, Horse-radish, Asparagus, Dewberries**, and an extra fine lot Raspberries. Splendid assortment **Ornamental and Shade Trees, Ornamental Shrubs** and **Hedge Plants**.

EGGS from B. P. ROCK and BROWN LEGHORN FOWLS at \$1.00 per **doz.** Also a few pullets and cockerels of these breeds at \$1.00 each for immediate delivery. Write for Catalogue to

J. B. WATKINS & BRO., Hallsboro, Va.

The "LANSING"
PERFECT TUBULAR SILO
 is the Best Silo Made.

Continuous Doorway. Have no other.



A. M. D. HOLLOWAY,
 Builders Exchange, Phila., Pa., U. S. A.
 Write for Catalogue and Prices.

Insist on having the Lansing. It will save your entire crop.....

A full page notice elsewhere of the annual sale of imported large English Berkshire brood sows which will take place under cover on the Biltmore Farms February 9th, 1904, will be of interest to every breeder of this hog, so popular with the farmer and breeder and also the packer.

These sales have become an annual meeting ground for the prominent breeders of nearly every State. Over sixty attended last year even from as far off as Oregon, the majority looking for fresh blood or show stock or buying simply as an investment, and those not purchasing finding the trip a profitable one not only in the way of brushing up against their fellow breeders and catching up with the latest gossip of the trade and also to book orders for their young stock, etc.

The Biltmore Farms have certainly performed a good work by these annual sales through creating confidence in the market as to the value of a good animal, and since their last sale the breeders have reported an unusually brisk demand for animals of the required individuality and breeding at an average increased price of nearly 20 per cent. Last year the bidding at the sale was very keen as not only were the individual merits of the offering high, but there were apparently not enough to go around and the unprecedented average of \$221 per head was realized.

Many had to go home disappointed, so this year the number has been increased to 70 head and as, of course, no by-bidding is allowed and the animal is knocked down if only one bid is made, there may be some bargains. A rate of one and one-third fares for the round trip can be secured by taking a winter tourist's ticket to Asheville (1½ miles from the farms) which can be secured from all points north of the Ohio river and west of the Mississippi, and also from many points in Virginia as, Alexandria, Charlottesville, Norfolk, Old Point Comfort, Petersburg, Richmond, Shenandoah Junction and Virginia Beach. These fares are refunded to all purchasers of \$150 or over, and a special rate of \$2.50 per day has been made by the Kenilworth Inn, one of the best equipped hotels in the South.

The catalogue is mailed to all applying and shows an unusually choice lot of pigs. Experts from the North and Central States who have already examined this lot, say that it is the most uniform lot of the highest quality that has ever been gathered together. The blood lines are practically the same as were offered last year but furnish desirable outcrosses, being selected from testing and producing families so that every animal is either a winner or out of a winner and are backed up by a list of winnings which fill the catalogue to overflowing.

With the liberal terms offered by the farms, viz., that every animal is guaranteed in pig or money returned, the majority of purchasers have found previous offerings a very profitable in-

EACH LITTLE WIND

that blows is turned into value for the man who pumps or generates power for grinding, sawing, etc., with the

Freeman Steel Windmills.



Mills with genius to work and strength to stand. Full line high grades with special four post angle steel tower. Also Feed Cutters, Wood Saws, Corn Shellers, etc. Write for catalog 110

S. Freeman & Sons Mfg. Co., Racine, Wis.

No Money In Advance.

We will send any responsible farmer a

DITTO'S FEED GRINDER

Triple Geared, Ball Bearing, to test on his own farm. Grinds ear corn and all small grain. If it is not the easiest running, with largest capacity, don't keep it. It is strong and powerful—a time saver and a money maker. Send for circulars and full particulars.

G. M. DITTO, Box 48 Joliet, Ills.



You Try It.

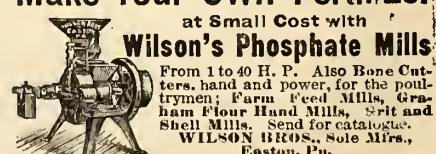
It costs nothing. Return at our expense if this mill fails to grind shelled corn, ear corn, all grains or mixed feed stuffs, easier, faster and better than any other.

New Holland Mills

are the practical, every day mills for every day wants. No other good mill at so low a price. Made in 3 sizes. Adapted to any kind of power. Don't fail to get our free catalogue before buying.

NEW HOLLAND MACHINE CO.,
 Box 153, New Holland, Pa.

Make Your Own Fertilizer



at Small Cost with Wilson's Phosphate Mills

From 1 to 40 H. P. Also Bone Cutters, hand and power, for the poultrymen; Farm Feed Mills; Graham Flour Hand Mills; Brit and Shell Mills. Send for catalogue.

WILSON BROS. Sole Mfrs.,

Easton, Pa.

WITH HUSKS ON

or off, cob corn or shelled, all grains. It will not choke. There's speed and fine or coarse grinding with

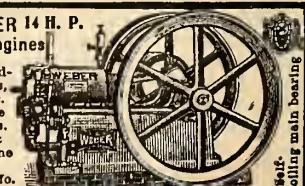
Kelly DUPLEX Grinding Mills.

Steady force feed. Double breakers, double set burrs. Little power, any kind, runs them. 4 sizes. Catalog free.

The O. S. Kelly Co., Springfield, Ohio.

The WEBER 14 H. P. Gasoline Engines

for running grinders, shredders, cutters, threshers, etc. Free catalogue gives all sizes. Weber Gas & Gasoline Engine Co., Box 122, Kansas City, Mo.



WE PAY \$33 A WEEK and expenses to men with rigs to introduce Poultry Compound. International Mfg. Co., Parsons, Kan.

THE YORK Improved Weeder

The flexibility of the teeth is the important point in a weeder. The York Improved Weeder has teeth of square spring steel with round points. These teeth have great flexibility, and being narrow in the body they do not whip or bruise the growing plants as flat teeth do. This style also allows more clearance and prevents the soil from being thrown up. Our square teeth do not break. The frame is made of strong flexible angle steel, and handles and shafts are adjustable. Send for free circular. The Spangler Corn Planters and Grain Drills are the best for you to use.

SPANGLER MFG. CO., 501 Queen St., York, Pa.

CREAM Separators

have been sold too much on talk. We sell ours on trial. Try it on your own farm. The American will pay for itself even though you have but a few cows. The price is remarkably low. The machine is a money maker. Write for separator book. Mailed free.

American Separator Co., Box 1078 Bainbridge, N.Y.

Won Medal at Paris Exposition.

Free Seeder's Book,

telling how, where to sow seed and how much to sow. Also describing the good old

CAHOON Broadcast Seeder,

the one that saves $\frac{1}{2}$ the seed. The best for 45 years. The book Sower's Manual sent absolutely free. Write for it.

GOODELL CO., 63 Main St., Antrim, N. H.

9 CORDS IN 10 HOURS



BY ONE MAN. It's KING OF THE WOODS. Saves money and backache. Send for FREE illus. catalogues showing latest improvements and testimonials from thousands. First order service agency. Folding Sawing Mach. Co., 55 N. Jefferson St., Chicago, Ill.



WARRINER'S CHAIN HANGING STANCHION. CLEAN, SAFE, COMFORTABLE.

MFG. BY W.B. CRUMB. Forestville, Conn.

PREPARED ROOFING FELTS.

We can save you money on your wants in this line. We offer you Two-Ply Tarred Roofing Felt, 100 square feet to the roll, complete with caps, nails and cement, per roll, \$1.15. Three-ply complete, per roll, \$1.85. Valentine, the highest grade on the market, complete as above. Price per roll, \$1.50. We have all kinds of roofing. Write for Free Catalogue No. 134 on material bought from Sheriff's and Receivers' Sales. CHICAGO HOUSE WRECKING CO., W. 35th and Iron Streets, Chicago.



vestment. Many of them realize more for a part of the first litter than they paid for the sow.

Not only are the dams here offered of such choice breeding and individuality but they are bred to a selected boar out of a lot of ten which include the champion boar at the Pan-American and the first prize and sweepstakes boar at the English Royal 1902, and in fact the ten boars to which they are bred for me group which cannot be equalled by any other breeding establishment.

The Biltmore herd has always been strictly quarantined, consequently cholera has been absolutely kept out and this last importation was not only quarantined in New York, but also an additional thirty days after shipment down here for any chance infection in transit. An absolute guarantee can be given, something which is certainly worth considering by those who may have experienced, or do not wish to experience the destruction of a herd representing years of work.

The recent International Stock Show proved "Prince Rupert" 79539 to be not only a grand show bull, but the sire of show animals, as two of his sons, "Prince Rupert 8th" and "Prince Rupert 19th" were exhibited by one of the foremost breeders in America and won money prizes, the former in the senior yearling and the latter in the junior calf class. They greatly resemble their sire and are being carried along for another year.

An idea of the rapidity of the growth of his calves and the indication that they will make large animals at maturity is shown by the weights of these calves at the opening of the show. "Prince Rupert 8th," calved December 17, 1901, weighed 1,885 pounds November 27, 1903, and "Prince Rupert 19th," calved April 1, 1903, weighed 755 pounds November 27, 1903.

"Prince Rupert" is owned by Edward G. Butler, "Annefield Farms," Briggs, Clarke county, Virginia, and heads the Annefield herd of registered Hereford cattle on his seven hundred acre farm in the beautiful blue grass section of the Shenandoah Valley, and Mr. Butler will be pleased to have those who are interested in Hereford cattle come to the farms and see his herd.

It is worth a long trip to see "Prince Rupert, 79539," the bull that won the grand championship of the American Royal Show, Kansas City, 1901, and weighs in show shape 2,525 pounds.

The advertisement of the Annefield herd appears on another page and those wishing a fine bull calf or cows bred to the champion Prince Rupert, should write Mr. Butler, as Hereford blood was never more in demand than now.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.



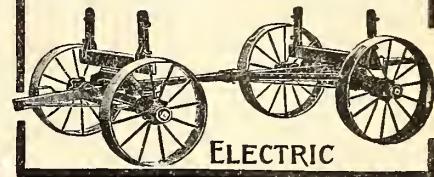
Wise Man's Wagon.

The man who has had experience in running a wagon knows that it is the wheels that determine the life of the wagon itself. Our

ELECTRIC STEEL WHEELS

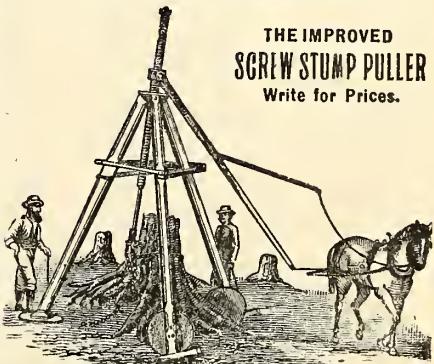
have given a new lease of life to thousands of old wagons. They can be had in any desired height, and any width of tire up to 8 inches. With a set of these wheels you can in a few minutes have either a high or a low down wagon. The Electric Handy Wagon is made by skilled workmen, of best selected material—white hickory spokes, steel wheels, steel bounds, etc. Guaranteed to carry 1,000 lbs. Here is the wagon that will save money for you, as it lasts almost forever. Our catalog describing the use of these wheels and wagons sent free. Write for it.

ELECTRIC WHEEL CO., BOX 146 QUINCY, ILLINOIS.



WE'LL PAY THE FREIGHT

and send 4 buggy wheels, Steel Tire on, \$7.25. With Rubber Tires, \$15.00. 1 mfg. wheels $\frac{3}{4}$ to 4 in. tread. Top Buggies, \$28.75. Harness, \$3.60. Write for catalogue. Learn how to buy vehicles and parts direct. Wagon Umbrella FIVE W. V. BLOOR, Cincinnati, O.



THE IMPROVED SCREW STUMP PULLER

Write for Prices.

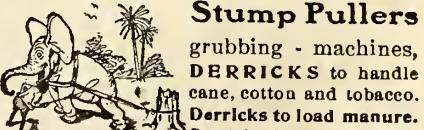
Chamberlin Mfg. Co., Olean, N. Y., U. S. A.

HERCULES STUMP PULLER



Clears an acre of heavy timber land each day. Clears all stumps in a circle of 150 ft. without moving or changing machine. Strongest, most rapid working and best made.

Hercules Mfg. Co., 413 17th St., Centreville, Iowa.



Stump Pullers

grubbing - machines, DERRICKS to handle cane, cotton and tobacco. Derricks to load manure. Derricks for all purposes.

Dept. L. NATIONAL HOIST & MACHINE CO., Chicago, Ill.



NO HUMBUG.

Farmer Brighton's Swine V. Stock Marker and Calf Dehorner. Stops swine from rooting. Makes 48 different marks. Extracts horns. Price \$1.50. Send \$1 for catalog. International, 500 Main Street, Des Moines, Iowa. Pat'd May 6, 1902. Hog and Calf Holder only 75¢.

GEORGE BOOS, Mrs., FAIRFIELD, IOWA.

STAR PEA HULLER WONDER OF THE AGE

Guaranteed to hull and clean 10 to 15 bushels of peas per hour by hand, or 20 to 30 bushels by power. Write for circular and prices.

STAR PEA MACHINE CO.,
...Chattanooga, Tenn.

FEED MILLS.

Every Man His Own Miller.

The latest improved. Does all kinds of work. Most durable; has ground over 15,000 bushels without repair or expense. The fastest grinder; has ground 300 bushels in 4 hours. Lightest draft and lowest price. The World's Best! Send for prices to the manufacturers.

N. M. FIELD MFG. CO., St. Louis, Mo.

STEEL ROOFING

100 SQUARE FEET \$2.00

Painted two sides; nails included. Strictly new, perfect, Semi-Hardened Steel Sheets, 6 feet long. The best Roofing, Siding or Ceiling you can use. No experience necessary to lay it. An ordinary hammer or hatchet the only tools you need. Either flat, corrugated or "V" grained. Write for our Free Catalogue No. 166 on Farm Supplies, Furniture, etc. CHICAGO HOUSE WRECKING CO., W. 35th & Iron Sts., Chicago

ROOFING TIN

Iron and paper roofing, nails, builder's hardware, sash, doors, etc., carriage and wagon goods, paints and oils, cook and heating stoves, guns, pistols, rifles, "Robin Hood" loaded shells. Do you use any of the above? Write us.

HARRIS HARDWARE CO., 409 W. Broad, Richm'd, Va.

WELL DRILLING MACHINES

The most successful money-making machines ever made. Also machines for boring wells with augers by horse power. Write us if you mean business.

Loomis Machine Co., Tiffin, Ohio.

A QUICK, SHARP CUT
hurts much less than a bruise, crush or tear.
DEHORNING Done with the
KEystone KNIFE
the safest. Quick, sharp cut. Cuts from four sides at once. Cannot crush hruise or tear. Most humane method of dehorning known. Took highest award World's Fair. Write for free circulars before buying.

M. T. PHILLIPS, Box 45, Pomeroy, Pa.

LATEST (Newton's Patent)
DEHORNER Every
Dehorner
Guaranteed
IMPROVED THOUSANDS IN USE.
Ask your hardware dealer for them or write
H. H. BROWN MFG. CO., • • DECATUR, ILL.

MILLIONS OF VEGETABLES.

When the editor read 10,000 plants for 16c, he could hardly believe it, but upon second reading finds that the John A. Salzer Seed Co., La Crosse, Wis., than whom there are no more reliable and extensive seed growers in the world, makes this offer.

THEY SEND FOR 16c POSTPAID their big catalog and sufficient seed to grow 1,000 each of cabbages, onions, radishes, 2,000 each of carrots, celery, lettuce and a bushel basket full of brilliant flowers, for 16c postage and this notice. Write them to-day. F. P.

OVERHEARD IN NEW YORK CITY.

She (seeing signs on the L station)—What is a Lehman heater, dear?

He (reading a paper)—Why, it's a thing for—

She—Is my hat on straight?

He—Yes, carriages and—

She—Oh! how funny. Mrs. Wilks has a new automobile coat. What about the carriages?

He—I said it was to heat—

She—Oh! Charlie, they were talking about heat and that new Radium light or something last night.

He (looks up from his paper at her)—What about Radium?

She—Didn't you say it was something about heat?

He—No, I did not. I am trying to tell you—

She—Well, you needn't get provoked about it.

He (pause)—Well, if you will only listen, dear; it is a foot warmer to heat carriages.

She—Oh, aren't they lovely. Let us get one for mamma.

VALUABLE BOOK FREE.

Most of our readers have no doubt noticed the advertisement of Dr. Jos. Hass, which has been appearing from time to time in these columns, in which he offers a free copy of his book, "Hogology" to any one asking for it. While, of course, "Hogology" is intended to promote the sale of Dr. Hass' Hog Remedy, yet the larger part of it is devoted to the discussion of the different phases of the swine raising question and can but be of profit to anyone interested in hog-raising. Dr. Haas, having had a successful experience of nearly 30 years as a specialist in the care of hogs and the treatment of their diseases, is able to, and has made this book a valuable, complete and practical treatise and it can be referred to as a reliable authority by all swine-raisers. See his advertisement elsewhere in this number and write for the book to-day if you have not a copy of it in your possession. It will be worth many dollars to you and is sent free for the asking.

CASTALIA HEREFORDS.

The Castalia ad this month has a special offering. Look it up. Herefords are on the boom just now.

UNION LOCK POULTRY FENCING

HAS BEEN FULLY
TESTED AND FOUND
SUPERIOR TO ALL
OTHERS.



Will fit uneven ground without cutting. Every part can be stretched perfectly. Made of high grade galvanized steel wire. All horizontal lines are cables, making it stronger. Has fine mesh at the bottom for small chicks. We also make extra heavy for gardens, lawns, etc. The largest poultry farms are using this fence—over 700 rods by Lakewood (N. J.) Farm Co. We pay freight and satisfy every one or no sale. Can ship from N. Y., Chicago, or San Francisco. Write for free catalog of Farm, Lawn and Poultry Fencing.

CASE BROS., Box 340, Colchester, Conn.

Genuine Spiral Spring Wire FENCES AND GATES

If your dealer does not have our goods in stock you can buy direct at Manufacturers' Price. Write for Catalogue and secure agency.

INTERNATIONAL FENCE AND F. CO.
Columbus, Ohio.



PAGE

DON'T UNDERTAKE TO CUT THE

No. 7 top wire on Page Stock Fence with wire cutters. You can't do it, and you'll break your cutters.

PAGE WOVEN WIRE FENCE CO., Adrian, Michigan.



LAWN FENCE

Many designs. Cheap as wood. 32 page Catalogue free. Special Prices to Cemeteries and Churches. Address COILED SPRING FENCE CO., Box Q, Winchester, Ind.

SENT ON TRIAL

A Fence Machine that will make over 100 Styles of Fence and from 60 to 70 rods a day.

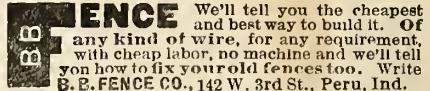
AT ACTUAL COST OF WIRE
Horse-high, Bull-strong, Pig and Chicken-light.
Wire at Wholesale Prices. Catalogue Free.

Kitselman Bros., Box 165, Muncie, Ind.



FENCE! STRONGEST MADE.

Bull strong, Chicken light. Sold to the Farmer at Wholesale Prices. Fully Warranted. Catalog Free. COILED SPRING FENCE CO., Box 82, Winchester, Indiana, U. S. A.

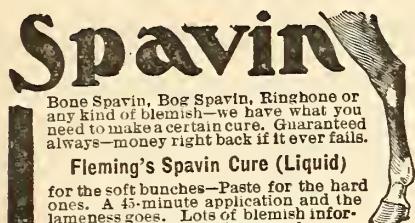


We'll tell you the cheapest and best way to build it. Of any kind of wire, for any requirement, with cheap labor, no machine and we'll tell you how to fix your old fences too. Write B. B. FENCE CO., 142 W. 3rd St., Peru, Ind.

: FOR SALE. :

Having rented out my river farm, will sell at private sale one new McCORMICK SELF BINDER, in use two days; ONE HAMILTON DOUBLE CORN PLANTER; ONE HAY RAKE, 10 feet width, all metal; some good WORK HORSES AND MULES; a lot of BREEDING EWES to have early lambs; and should like to have a general purpose farm hand to run my home farm. Address

JOHN MATHEWS, East Richmond, Va.



Bone Spavin, Bog Spavin, Ringbone or any kind of blemish—we have what you need to make a certain cure. Guaranteed always—money back if it ever fails.

Fleming's Spavin Cure (Liquid) for the soft bunches—Paste for the hard ones. A 45-minute application and the lameness goes. Lots of blemish information in the free book we send.



Do yourself what horse doctors charge big prices for trying to do. Cure Fistula or Poll Evil in fifteen to thirty days.

Fleming's Fistula & Poll Evil Cure is a wonder—guaranteed to cure any case—money back if it fails. No cutting—no scar. Leaves the horse sound and smooth. Write for our free book on diseases and blemishes of horses.

FLEMING BROS., Chemists, 280 Union Stock Yards, Chicago, Ill.

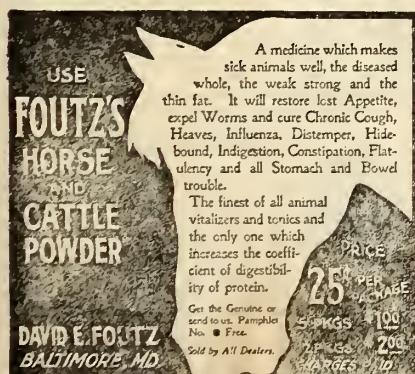


BLACKMAN'S MEDICATED SALT BRICK

The only guaranteed Tonic, Blood Purifier, Kidney and Liver Regulator and aid of Digestion for all stock. A sure hit on worms. Ticks cannot live. No dosing, no drenching, and no waste of feed. Your horse his own doctor. Endorsed by thousands.

full descriptive circulars, testimonials, etc. address

Blackman Stock Remedy Co.
920 Highland Park, Chattanooga, Tenn.



A medicine which makes sick animals well, the diseased whole, the weak strong and the thin fat. It will restore lost Appetite, expel Worms and cure Chronic Cough, Heaves, Influenza, Distemper, Hide-bound, Indigestion, Constipation, Flatulency and all Stomach and Bowel trouble.

The finest of all animal vitalizers and tonics and the only one which increases the coefficient of digestibility of protein.

Get the Genuine or send to us. Pamphlet No. 1 Free. Sold by All Dealers.

PRICE
25c
50c
100c
250c
500c



DEATH TO HEAVES
Guaranteed
NEWTON'S Heave, Cough, Distemper and Indigestion Cure. A veterinary specific for wind, throat and stomach troubles. Strong recommends. \$1.00 per can. Dealers. Mail or Ex. paid. Newton Horse Remedy Co., Toledo, Ohio.

DORSET CLUB MEETING.

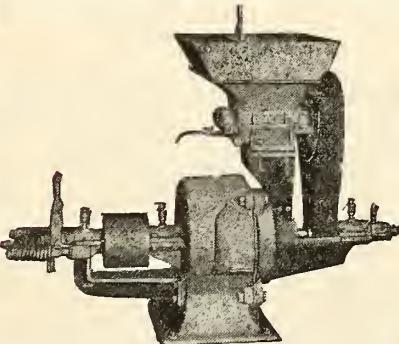
The Continental Dorset Club met in the Pure Bred Live Stock Record Building, at 2 P. M., December 2. Report of the treasurer showed a prosperous condition, more registries having been made than in any previous year and a surplus remaining in the treasury.

The most important resolutions offered were those for special premiums to be given next year at the World's Fair, St. Louis, and at the next International.

Officers elected were: President, R. H. Harding, Thorndale; International Secretary-Treasurer, J. E. Wing, Mechanicsburg, O.; Executive Committee, Maj. J. A. McGillivray, Uxbridge, Ont., Arthur Dawks, Allamuchy, N. J., J. B. Henderson, Burgettstown, Pa., and H. P. Miller, Sunbury, O.

CHAS. B. WING.

It is no longer necessary to purchase a crusher for preparing ear corn for burr stone grinding. The cut shown



herewith is of the Scientific Burr Stone Mill made by The Foos Manufacturing Co., at Springfield, Ohio, who have combined with it a double crushing breaker of large capacity which thoroughly breaks up the cob and prepares it for grinding upon the burr stones. The action of this breaker is such as to leave less of the work to be done by the burr stones than is usually the case with even a separate crusher. Besides this, the outfit of machinery is much less expensive, takes less room, less power and needs less belting and shafting, being much more convenient to operate and maintain. Catalogue of this and 51 other styles of grinding mills will be mailed to our readers upon request to the company at Springfield, Ohio.

"SURE HATCH CATALOGUE."
Our new 1904 catalogue is now ready for mailing. No poultryman or fancier should be without this valuable book. It is beautifully illustrated and gives dozens of photos of the machines in actual operation in the hands of the people in all parts of the country. The incubators and brooders are described fully in every section, and in addition this book contains sound poultry sense. Send for one; they are free.

SURE HATCH INCUBATOR CO.,
Clay Center, Neb., or Indianapolis, Ind.



Warranted
to give satisfaction.

GOMBault's CAUSTIC BALSAM

A safe, speedy and positive cure for

Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all bunches from Horses or Cattle.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, etc., it is also valuable.

Every bottle of Canthic Balsam is Warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio.

SAN JOSE SCALE and other insects
can be controlled by using
GOOD'S CAUSTIC POTASH
WHALE OIL SOAP. No. 3.

It also prevents Curl Leaf. Endorsed by entomologists. This soap is a fertilizer as well as insecticide 50 lb. kegs, \$2.50; 100 lb. kegs, \$4.50. Full barrels, 270 lbs., at 3½c. per lb.; barrels, 425 lbs., at 3½c. Large quantities, special rates. Send for circular.

JAMES GOOD,
939-41 N. Front St., PHILADELPHIA, PA.

FRAZER
Axle Grease Best in
the world.
Its wearing qualities are unsurpassed, actually outlasting 3 bxs. any other brand.
Not affected by heat. Get the Genuine.
FOR SALE BY ALL DEALERS.

AGRICULTURAL LIME
AND BUILDERS' LIME
Send for Circulars and Price-List

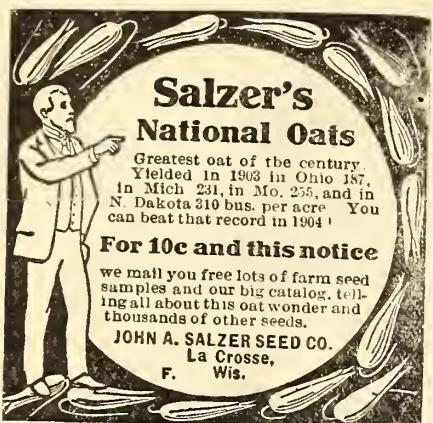
FELLSWORTH LIME WORKS,
REEVES CATT, Agent,
Bodley, Augusta County, Virginia.



Krausser's Liquid Extract of Smoke

Smokes meat perfectly in a few hours. Made from hickory wood. Delicious flavor. Cheaper. No smokehouse needed. Send for circular.

J. KRAUSER & BROS., Minton, Pa.



TREES! TREES!!

I offer a fine lot of whole root trees.

Apples, Pears, Peaches, Cherries, Plums, Grape Vines, Raspberries, Etc.

Save agent's commission by sending your orders to the nursery.

CATALOGUE FREE.

All Stock Inspected and Fumigated.

WERTZ'S NURSERY, Salem, Va.

GRIFFITH & TURNER SEEDS

Quality First Consideration

Full of life, sure to grow. We grow in the North what develops elsewhere. All our seeds come to you from their own special climates, whether North, East, South or West. We sell freshness, strength and the vigor that comes from the seeds' own climate. We also handle

FARM, GARDEN, DAIRY & POULTRY SUPPLIES

You'll find it convenient to buy all supplies from one reliable house. It keeps us busy and we can make you better prices. We issue a great catalog of such utilities. See it for bargains. Get FREE general catalogue No. 10. GRIFFITH & TURNER COMPANY, 205 N. Paca Street, Baltimore, Md.

Strawberry Plants,

All grown in fresh rich ground, healthy, well-rooted plants that will please you; over 30 kinds to offer. Raspberry plants and Peach trees also; see us before you buy. Our stock has been thoroughly inspected and found free from any disease.

Address JOHN LIGHTFOOT, Sherman Heights Tenn.



BERRY PLANTS and Berry growing has been my Specialty for more than 25 years. 40 of the best new and standard varieties; vigorous, we root and true to name. **THE NEW**

STRAWBERRY I introduced last season has proved a winner again the past season. It will pay you to plant my plants, they grow and produce large crops of big berries. Catalogue Free. Write to-day. JOHN W. HALL, Marion Sta., Md.

A SUGGESTION AS TO FEED MILLS

Among the best of the mills, all things considered, is the triple geared, ball bearing grinder, manufactured by G. M. Ditto, of Joliet, Ill. Two points always to be borne in mind in selecting a mill are easy grinding and rapid grinding. On these two points the Ditto advertisements everywhere unequivocally invite intending purchasers to return his mill if it is not found on trial to be the fastest grinding and easiest running. No money is required in advance. That is made as prominent as anything else in the advertisements. The mill is adapted to grinding ear corn and everything from that on down, including the small grains. The ball bearings in connection with the triple gear account for the rapid grinding without worrying the team. If any of our readers are still in need of a mill they should investigate Mr. Ditto's before placing an order. He will forward descriptive matter and the trial under his policy of selling will cost you nothing if the mill does not prove the claims made for it.

HIS FIRST PAIR.

At recess one morning little Nathan Garowski withdrew to a corner and wept, and the heart of his pretty teacher was moved with compassion.

"What's the matter, Nathan?" she inquired gently. "Why don't you play with the others?"

Nathan looked up with dimmed eyes. Dust and tears mingled on his brown cheeks. He pointed mutely to his skirt and then broke into a roar: "It was the dress of Rebecca. My mudder no money has for buy me anyting. I nefer have the trouser, and the children—the children—they stick out the finger on me, and make a laughs. They call me—call me—a gi-girl."

"Don't mind them, dear," said Alice Harmon with sympathy. "They shall not laugh at you long. I will get you a coat and trousers too."

Several days later Nathan appeared in the glory of a new suit, and strutted about, basking in the admiring glances of those who had despised him. His cup of pride was filled to overflowing when the superintendent came in with the principal for a visit of inspection. Nathan, well in the foreground, glanced at his garments and looked at the strangers for approbation.

"Why, little boy, what a fine pair of trousers!" said the superintendent affably. "Where did you get them?"

Nathan drew himself to his full height, and outstretched his hand in the direction of his beloved teacher: "I got them off her," he announced. "I got them off Miss Harmon."

Then Alice Harmon, with the blush of confusion on her face, explained, "The—children—on the East Side always say 'off' when they mean 'from'."—January Lippincott's Magazine.

Mention the SOUTHERN PLANTER in writing.

Peach and Apple Trees,

IBONAVISTA NURSERIES, Greenwood, Va.

We offer a fine lot of choice trees for Fall and Spring planting.

Our apple trees are the best—Wine Sap, Mammoth Black Twig, York Imperial and Albemarle Pippin, all perfect and well grown trees.

Our peach trees are the standard sorts, Stump, Elberta, Bilyeu's (Comet,) Wonderful, Champion, Globe, Picquet's Late, Albright's Winter, Crawford E. & L., etc.

We send out none but good trees and have never had a complaint made by any purchaser of our stock. Order soon, especially Peach-s, as good trees will be very scarce this season.

CHAS. F. HACKETT, Manager.

We offer all kinds of:—

..Nursery stock.

STRAWBERRY PLANTS at reduced prices; 1 doz. rooted GRAPE VINES of CONCORD, NIAGARA, WARDEN, etc., at \$1; all healthy stock and fumigated before shipped; grown on ideal land for fine roots and smooth bodies.

Send for Special Price to Planters.

EMPORIA NURSERIES EMPORIA, VA.

No. 1 Agents wanted. We refer to any business house here as to our honesty.

How Sweet Sells

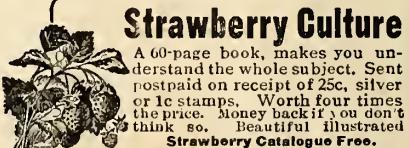
There are no agents' misrepresentations or impositions when you buy of us. We employ none, fee none. We are responsible direct to you. Our stock has the vigor, health and fruiting quality which comes from careful growing. People who have been buying Sweet's Genesee Valley

FRUIT TREES

shrubs, vines, etc., for 35 years say we treat them right. We make right filling of orders a personal matter. That's something. We encourage neighbors to join in sending orders and get the benefit of club rates and low freights. We recognize that our long distance trading depends on our pleasing patrons. You are invited to investigate. Our catalog always free. Write for it today.

Established 1869.

GEO. A. SWEET NURSERY CO.,
22 Maple St., Dansville, N. Y.



Strawberry Culture

A 60-page book, makes you understand the whole subject. Sent postpaid on receipt of 25c, silver or 1c stamps. Worth four times the price. Money back if you don't think so. Beautifully illustrated.

Strawberry Catalogue Free.

W. F. ALLEN, SALISBURY, MD.

\$240 FOR LARGEST WATERMELONS

After 40 years of experimenting and testing all notable varieties of watermelons, we now recommend, especially "Tenderweet" for home use and "Emerald" for both home and market. We think they are the best obtainable. Seeds 10c a paper in silver, 24,000 papers. The purchaser who grows the largest melon of either variety will postively receive one tenth of our gross sales of seeds of that variety. Caution! Wrap your silver in a little paper and write your name and P. O. Address plainly.

LEE SEED CO., Burnt Corn, Ala.

DIGGS & BEADLES RELIABLE SEEDS —FOR 1904.—

New crop Tobacco, Cabbage, Radish, Beets, Lettuce and all Seeds of the highest quality and germination for the Gardener and Farmer.

DIGGS & BEADLES,
1709 E. Franklin St., - Richmond, Va.
Catalogue mailed FREE on request.

PEDIGREED SEED CORN.

Three varieties pure white corn. Huffman, large, late, for fertile soils only. Improved Watson, medium, for medium soils. Hickory King, especially adapted for cultivation on thin uplands. Price, \$1.20 per bush., f. o. b. Normandy. **PROGRESS FARM,**
Box 52. Normandy, Tenn.

Alfalfa Bacteria Infected Soil

Can be obtained from Ewell Farm Experimental Plot. A perfect stand three years of age, abundantly supplied with root nodules. Price \$1.00 per 2 bus. burlap bag, weight about 150 lbs., f. o. b. Ewell's Station, Tenn.

GEO. CAMPBELL BROWN,
Spring Hill Tenn.



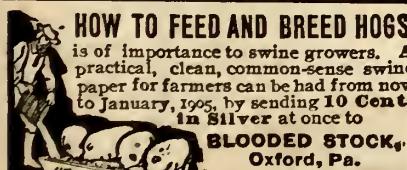
The Fruit Grower,
published at St. Joseph, Mo.,
will be sent 1 year if you send
25c and names of 10 farmers
who grow fruit. "The Fruit
Grower is the best fruit paper
we have, East or West." —Prof.
Price, Dean Ohio Agric. College.
Illustrated. Regular price 50c a year.
For sample address
FRUIT-GROWER CO.,
3125. 7th St., St. Joseph, Mo.

THE PEACH GROWER

Fruit Culturist and
Trucker's Magazine

Published Monthly, Atlanta, Ga. Is indispensable to growers of fruit and truck. Best horticulturists in the land are regular contributors. Handsomely printed and illustrated. Send 25 cents and names of 25 fruit growers, for a year's subscription. You can't afford to miss reports of Georgia experiments now being made on peach orchards.

- WANTED -
Shippers of POULTRY of all Kinds,
Dressed HOGS, GAME, etc., to write to
E. W. EVANS & CO.,
1313 E. Cary St., RICHMOND, VA.
For prices before shipping elsewhere.



HOW TO FEED AND BREED HOGS
is of importance to swine growers. A
practical, clean, common-sense swine
paper for farmers can be had from now
to January, 1905, by sending 10 Cents
in Silver at once to

BLOODED STOCK,
Oxford, Pa.

CURING HAMS.
"Enquirer," wants to know how to
keep hams free from insects. We keep
our hams through the second year per-
fectly clear of any insects.

We usually kill our hogs by the first
of December. After having been salted
and packed down for six weeks, we
wash and let it dry a day or two, then
with whole grain black pepper ground
as for table use, put into molasses—
not syrup—till tolerably thick, smear
well over the flesh side of the meat
and well into the end of the bones, and
hang up—we do not smoke. Keep
some of the mixture convenient to put
on any spot that should get bare. Our
meat hangs till used. V. V.

REMITTANCES OF MONEY THRO' THE MAILS.

From Report of Hon. E. C. Madden,
Third Assistant Postmaster Gen-
eral, December, 1903.

The practice of the public of using
postage stamps for small remittances
in the mails has grown to enormous
proportions. The result is that the de-
partment loses heavily, not only be-
cause of improper sales by postmasters
for that purpose, thereby increasing
their compensation wrongfully, but in
imposing upon postoffices, especially in
the large cities, the labor of handling
mail matter the revenues from which
are derived by other postoffices. It
encourages trafficking in postage
stamps, and this encourages the rob-
bery of postoffices. Many plans have
been proposed for obviating this evil,
but none which have come to my at-
tention equal in simplicity, effectiveness
and efficiency, the "post-check"
proposition. With such a simple means
of making remittances, merchants
would soon be compelled to refuse
postage stamps as currency. The post-
age stamp would then lose its value
for the purpose of remittance. I rec-
ommend this subject to your favorable
consideration, and trust that you may
deem it proper to recommend that this
system of transmitting money in the
mails be authorized at least in an ex-
perimental way.

TOOK HIS MEDICINE.

Scrap formed an acquaintance with
the baker's small daughter, Sophie—
not quite as neat and agreeable a
young person as could be desired, so
his mother absolutely forbade him to
go over to the bakery or invite Sophie
to our house. Time and again the at-
traction across the street proved too
great, and Scrap disobeyed. At last
the mandate went forth: Scrap was to
be whipped if he went again. This was
too terrible, so days passed and Scrap
contented himself with only watching
Sophie from the parlor window. At
last one afternoon he burst into his
mother's room with despair on his
small face.

"Mamma," he exclaimed, "whip me
now please, hard, quick as you can, for
I must go to see Sophie!"—Lucy C.
Lillie, in January Lippincott's.

**Bad grocer
confesses his
badness by sell-
ing bad lamp-
chimneys.**

MACBETH.

You need to know how to manage your
lamps to have comfort with them at small cost.
Better read my Index; I send it free.

MACBETH, Pittsburgh.

WANTED

A good settled man with small fam-
ily to attend to 20 cows and 15 heifers,
all thoroughbred. Must understand
feeding for quality as well as quan-
tity and keep daily record of same; as-
sistant furnished. Up-to-date barn
latest improvements, with two 50-ton
silos attached. Address

F. T. ENGLISH,
"The Hermitage," Centreville, Md

WANTED!

ALL KINDS OF LIVE WILD BIRDS AND ANIMALS

Particularly Deer, Wild Turkeys, White
Squirrels, Ducks, Swans, Bob White Quail,
Grey Squirrels, Bear, Etc.

CECIL FRENCH,
718 Twelfth St. N. W., Washington, D. C.

Examine Your Cattle for Lice

GIBSON'S LIQUID LICE KILLER

Kills Lice on Cattle, Horses, Hogs and
Fowls. Your money back if it fails.
Gallon Can \$1.00.

GIBSON & LAMB, West Alexander, Pa.

THE KEELEY INSTITUTE GREENSBORO, N.C.

For the treatment of THE LIQUOR, OPIUM, MORPHINE and
other Drug Addictions. The Tobacco Habit, Nerve Exhaustion

NO MORE BLIND HORSES—For Specific
Ophthalmia, Moon Blindness and other Sore
Eyes. BARRY CO., Iowa City, Ia., have a
cure.

Mention the SOUTHERN PLANTER in
writing.

F FARMS FOR SALE!

No. 16.

130 acres—20 acres hardwood, balance in good state of improvement, and a splendid quality of red clay subsoil; 50 acres in wheat and timothy; 20 acres in meadow, balance is new land, and will be for corn next spring. Situated in excellent neighborhood of refined people. Twenty-two miles from Washington, 5 miles from Herndon Station. Fronts on pike. Comfortable 4-room house and all buildings. Farm watered by large branches. Price, \$20.00 per acre. Terms, to suit purchaser.

No. 17.

80 acres—15 acres in hardwood, balance in grass, except 20 acres for corn. Fronts on pike; 5 miles from railroad station. Watered by large branch. All in good state of cultivation. No buildings. Price, \$18.00 per acre. Easy terms.

No. 18.

385 acres in lower Loudoun county, only 23 miles from Washington; 40 acres in hardwood, balance in good state of cultivation, divided into 8 fields, with running water in all; well fenced; adopted to grain and grass. Two good cattle barns, a good, comfortable 7-room dwelling, with a large, bold spring within 50 yards, an all necessary outbuildings. Situated $4\frac{1}{2}$ miles from Sterling Station. This farm has 137 fine stock sheep and 21 fat cattle weighing 1,200 pounds now; 80 acres sown in wheat and rye; 50 acres in meadow and balance of fields and pasture. If bought within the next 60 days the wheat and sheep will go with the farm. Price, \$8,000, on easy terms. Write for full description.

No. 19.

215 acres in upper Fairfax county, 20 miles from Washington; 6 miles from railroad; fronts on pike; near village with stores, post-office, churches and shops. Splendid brown chocolate clay soil. Seven fields, watered by branches and springs. A good 6-room frame house and all necessary farm buildings; 60 acres sown in wheat and grass; 25 in rye and grass; 30 in meadow, balance in pasture and for corn—all in good condition. Price, \$25.00 per acre; one-third cash, balance on 6 years' time, if desired.

No. 5.

Contains 163 acres; one-half under cultivation; balance in second-growth timber. Good seven-room dwelling and necessary outbuildings; good orchard in fine fruit section. Farm lies near Southern railroad, twenty miles from Washington; well watered; a splendid dairy farm. Price, \$2,000.

Farm No. 2.

Contains 265 acres; 215 under cultivation; 50 acres original oak and

hickory. Fronts on the pike running from Winchester to Alexandria; five miles from railroad; one-half mile from proposed electric railroad. Excellent six-room dwelling house, with broad halls, standing in a large, nicely-shaded blue-grass lawn; all necessary outbuildings; land chocolate clay, with stiff clay subsoil; all level, but rolling enough to drain well; fine for wheat and grass; well watered. Owner contemplates making improvements. But if sold before, price \$25 per acre, on easy terms.

I have a number of other good farms for sale, both large and small. Write for description and state just what you want, and will be glad to serve you.

W. E. MILLER, Herndon, Va.

HIGHCLERE LUSTRE CARLISLE.

This magnificent young boar, one of the best and truest types of the pure English Berkshire, has just been added to the herd of Duntreath Stock Farm, and fully measures up to the requirements of that farm's motto—"Bred-in-the-Purple."

Highclere Lustre Carlisle is a son of that famous English boar Royal Carlisle, winner of the first prize at the great Royal Show of England, by Faithful Commons, himself a great boar, and out of May Burton III, one of England's greatest show and brood sows, while his dam, Topper's Lustre, a top-notcher, is by the world famous Highclere Topper (a boar that won every first prize but one in England and America for which he was shown), and out of the famous Lustre, probably for her opportunities the greatest brood sow ever owned in America.

Better breeding cannot be found, and this combination of the bluest blood of all England and America's champions has produced a magnificent type, near perfection, well sprung ribs, perfect head, splendid back, with deep heavy hams coming well down over hock and into flank, and perfectly straight on feet and legs.

It always gives us pleasure to learn of any advancement in the breeding stock of the South, and we congratulate the management of Duntreath Stock Farm on this acquisition and we predict that the get of this blue blood aristocrat will maintain the high reputation of his great ancestry and that of Duntreath Berkshires.

T. W. Wood & Sons, seedsmen, have just issued two interesting leaflets, one about Canada field peas for sowing during January and February, and the other about Tobacco Dust Insecticide. Both are very timely and valuable. Tobacco Dust Insecticide is being very largely used now during the winter as a preventive of strawberry weevil, fruit tree borers and other insects which prey on fruits and vegetables. These leaflets will be mailed free, on request to T. W. Wood & Sons at Richmond, Va.

NORTHERN VIRGINIA

Grain, Fruit, Dairy and Blue Grass Farms of Every Class within one hour of Washington, D. C.

LOUDOUN COUNTY Farms a Specialty....

Catalogue on application.

P. B. BUELL & SON, Real Estate Brokers, Herndon, Fairfax Co., Va.

HOMES AND THE PLACE TO FIND THEM.

No place in the United States can a man do so well at farming, for the money invested, as in Virginia. Lands are cheap; climate good, and the best of markets close at hand. It is the State of all others, for a comfortable all the year round home. The James River Valley Colonization and Improvement Company offer superior advantages to land purchasers. For free 36 page land pamphlet, address

W. A. PARSONS, Vinita, Va.
C & O Main St. Depot, Richmond, Va.

..To Homeseekers.. "THE BUSINESS OF FARMING IN VIRGINIA."

Is the title of a new pamphlet issued by the Norfolk and Western Railway Company. We will gladly mail you a copy.

W. B. BEVILL, PAUL SCHERER, Agt., G. P. A., Lands and Immigration, Roanoke, Va.

I HAVE A LARGE LIST OF FRUIT, POULTRY and TRUCK FARMS

Ten, Fifty and One Hundred Acres each, with good buildings, close to steam and trolley lines, easy access to the city. Also,

GRAIN AND STOCK FARMS

From 100 to 1,000 acres at low prices—all the way from \$5 to \$50 per acre. Write for Catalogue.

J. R. HOCKADAY, Richmond, Va.
Box 257.

IF YOU WISH TO SELL —OR BUY— VIRGINIA LANDS

Communicate with us. Write for free "Virginia Real Estate Journal," containing many splendid bargains.

R. B. CHAFFIN & CO., Inc., No. 1 N 10th St., Richmond, Va.

FARM WANTED

to work on shares; dairy farm preferred; must be stocked. **B. H. VAN MATER, Hazlet, N. J.**

I Can Sell Your Farm....

If located in one of these Virginia counties: Prince George, Chesterfield, King William, Gloucester, New Kent, King and Queen, Hanover. Send description, stating price.

JOHN JELINEK, 1116 Pine Alley,
Braddock, Pa.

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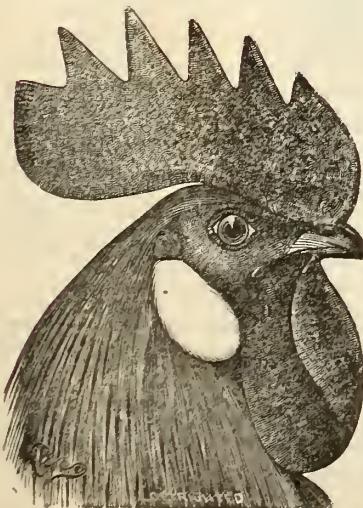
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Address A. T. MATTHEWS, Box 36, Parksley, Va.

THREE IN ONE.

A farmer living not far from Philadelphia sent to an employment agency in that city for a farm hand. The agency notified the farmer that one William Collins would arrive at his place the following morning in time for breakfast. William arrived as promised and in excellent season, but not quite early enough to assist with the milking. He was about seven feet tall and slim as a hay-fork.

When he took his seat at the breakfast-table and really got action on the family laid down their knives and forks and stared. It was evident that William had missed several meals before he arrived, for he put away everything in sight.

"Perhaps you had better eat your dinner too while you are here," suggested the farmer sarcastically as he observed his new hand looking wistfully at the empty plates.

"Maybe it would be a good idea," said William in a pleased tone.

The farmer's wife cooked more food and placed it before him. His dinner disappeared with the same rapidity as had his breakfast. But when he had finished he made no motion to leave the table.

"Probably you could eat your supper now also," said the farmer, whose amazement had given place to wrath.

"I'm sure of it," answered William, and he waited contentedly until the farmer's wife cooked and set before him his supper. When this, likewise, was gone the farmer said peremptorily, "Now, get to work as fast as you can."

"Oh, no," said William as he arose leisurely from the table, "I never work after supper."—Caroline Lockhart, in January Lippincott's.

The stump pullers, grubbing machines and derricks, manufactured by the National Hoist & Machine Co., of Chicago, Ill., and advertised elsewhere in this paper, are widely recognized as the lightest and best ever introduced to the public notice. They are standard machines, and are sold nearly everywhere. They do their work most perfectly, and satisfactorily, and are held at a price, within the means of almost any one, who has use for such implements. The grubbing machine is a combination derrick and grubber. The derrick has a fork attachment, and is used for loading manure, etc., from pile or surface of yard, onto wagons. The company wants agents to handle these machines. Circulars giving full particulars, sent on application.

PROFITABLE HOGS.

This is the title of a valuable pamphlet sent us by the David E. Foutz Co., Baltimore, Md. It is, in fact, an address made by F. C. Root, V. S. M. D., before the Continental Association of American Farmers, held last September. Our readers are requested to send for it.

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INCUBATORS****ARE GUARANTEED**

To hatch a larger percentage of fertile eggs, To produce larger and more vigorous chicks, To operate with less oil and expense, To require no supplied moisture, To be self-ventilating, To have a more sensitive, accurate and durable regulator, To maintain a more even temperature, To be more strictly automatic in action and

To give better results in your hands than any other make or style incubator in the world.

Send for test has proved our claims. We back above guarantees by every dollar we possess. If the Cyphers does not do satisfactory work in your hands, you get your money back. Endorsed and adopted by 26 Government Experiment Stations and used by a large majority of the leading poultry men. Catalog for 1904 free if you name this paper. Address nearest office.

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Incubators**

are truthfully pictured and their actual working tool in about go of the 80 pages of our new catalogue. The rest of the book gives information about the chicken business. We begin the story in the egg and end it with the marketing of the fowls. There's knowledge which will benefit anyone and may mean dollars to you. Our incubators are driving hens out of business. They work regardless of weather or of seasons. You can count on hatching every fertile egg. Money back if not all we claim. We pay freight. The book is free. Just say "Send Victor Book" and we'll do it. GEO. ERTEL CO., Quincy, Ill.

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Very little lamp gas in an incubator egg chamber often kills every germ. No gas can possibly creep into the

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BABY CHICK FOOD.

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Two distinct flocks of Mammoth Bronze Turkeys from which we make matings for breeding purposes at reasonable prices. Eggs in season

BARRED PLYMOUTH ROCKS,
WHITE PLYMOUTH ROCKS.

BIRDS AND EGGS.

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Barred Plymouth Rock
and S. C. B. Leghorn.

Turkeys all sold. Eggs in season. Mrs. JNO. F. PAYNE, University Station, Charlottesville, Va.

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Rose Comb Black Minorcas.

They have all the good qualities of the single combs, and as egg producers they are superior on account of their combs not being affected by frost.

20 Cockerels for sale—price, reasonable. Eggs in season.

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Most Fashionable Strains of POULTRY and STOCK.

"Protection" Duroc Jersey Hogs; "Perfection" Poland-China Hogs. Hawks, Thompson Bradley Bros., Miles and Conger **Barred Plymouth Rocks**

The Home of high breeds. My motto: Farmer's stock, Farmer's prices.

The Cedars Wm. G. OWENS,
P. & S. Farm. Midlothian, Va.

ORPINGTON CHICKENS and POLAND-CHINA PIGS.

EGGS from my best strain of Buff Orpingtons, \$1.00 per 15, \$3.00 per 50. A few Cockerels at \$1.00 to \$1.50. Poland-China Pigs 8 to 10 wks. old at \$3.75 each, or \$7.00 pair, \$10.00 trio. These carry the very best blood.

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Each, or 5 for \$4.50. EGGS of same in season, 75c. for 15. Mrs. A. W. DAVIS, Blanton, Va.

GOOD HOUSEKEEPING.

SALSIFY SOUP.

One of the most delicate and delicious of all the soups is made of salsify and costs almost nothing when one is so fortunate as to live on a farm.

Parboil the salsify and scrape it. Put one quart of salsify into a pot with five pints of water and the bones of a roasted chicken, or a squirrel. Boil until the salsify is soft, take them out and put through a sieve, return to the soup and add one quart of rich milk, two large spoons of butter, two eggs beaten very light, and mixed with a little cold water before putting them into the hot soup. Let it all boil up once and serve hot with bread cut into small squares and toasted a rich brown.

STEWED OYSTERS.

Drain off the liquor from a gallon of oysters and put it in a pan to heat. Skim well. Have one quart of milk scalding hot, pour it into the boiling liquor, now put in the oysters, and add one-half cup of melted butter, salt, pepper, a dash of red pepper and a cup of chopped celery. Just before taking it from the fire add the yolk of an egg beaten very light and a dessert spoon of cornstarch, mixed with a little cold water. Serve with crackers or toasted bread.

STUFFED STEAK.

Select three nice pieces of round steak. Trim off the ragged edges and take out the bone. Lay the largest piece in a pan and cover it with a stuffing made with bread crumbs, salt, pepper, butter, a little sage, and a few teaspoons of onion juice, damped with a little water or stock. Then put the next piece of steak on this and stuff as before. Put on the top piece and sprinkle on a little of the dressing. Either pin this together with skewers or wind a cord about it so as to keep it in place and put the pan on the stove with a cup of hot water, to keep the steak from burning. Let it cook slowly, basting constantly. Serve hot, cutting the pieces through the three layers of meat. If the steak is tough lay it in a pan with vinegar and water for an hour before preparing.

FRIED STEAK.

Tough steak is much better fried than broiled, and if the vegetable compound is used instead of lard, I think it is fully as healthful as the broiled, and possibly more so. Soak the steak for awhile in vinegar and water, cut it into pieces as big as your hand, beat it thoroughly on both sides and dip it into flour seasoned with salt and pepper. Have the lard as hot as possible and fry the steak quickly, turning several times. If you have a few canned tomatoes left over turn them on the steak just before taking it off, adding a little water and thickening to the gravy.

SAUSAGE.

Grind fifteen pounds of lean meat and three pounds of backbone fat and if you can get it, put in two pounds of lean beef. Season with six tablespoons

HOLLYBROOK FARM

Barred Plymouth Rocks

Are healthy, vigorous stock, from the best laying strains in this country.

We have first-class cockerels and pullets for sale, at \$1.50 each. A good chance to infuse new blood into your flocks.

We also have a few Silver Laced and White Wyandotte cockerels, \$1.50 to \$2.00 each.

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BRUSHY HILL POULTRY YARDS, O. E. SHOOK, Prop. New Sterling, N. C.

Barred and White PLYMOUTH ROCKS

Single and R. C. B. Leghorn, S. L. Wyandottes, Light Brahma and B. Minorca Cockerels for sale. \$1 per single bird; a trio for \$3.

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WYANDOTTES.

New blood, choice specimens, strong and healthy birds of fine plumage, ready for shipment at \$1.00 each. Also pure-bred POLAND-CHINA PIGS at \$5.00 each.

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The Mammoth Bronze is the finest specimen of turkey in the world. I do not hesitate to say that I have the finest birds in Virginia. If you will file your orders now you will get choice ones out of a choice flock. I also have a few Barred Plymouth Rocks for sale. My fowls are all thoroughbred. Write for circulars and rates.

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Barred, Buff and White Plymouth Rocks, White Wyandottes, Light Brahma, Buff and Partridge Cochins, Black Minorcas, Black Langshans, Brown and White Leghorns.

Now is the time to secure bargains.

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BUFF ORPINGTONS.

A few utility bred birds for sale. Write for prices. T. M. KING,

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Mammoth Bronze Turkeys, Poland-China Pigs,

from best prize winning stock. Special prices for December.

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A good saddle horse; fine jumper.

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Raised on 400 acre blue grass farm—the best I have ever seen. Eggs from White, Buff and Partridge Wyandottes in season. Address **Huguenot Poultry Yards, ... Dublin, Va.**

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Young stock for sale in

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White Plymouth Rocks.

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Black Devils and Red Cubans.

These cocks won 90 per cent. of battles fought in 1902 and 1903, and have never lost a battle when gameness and cutting qualities could win. Choice lot of young and old stock for sale.

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SILVER-LACED WYANDOTTES

For sale. Roosters and Pullets, \$1.00 each. G. F. COX, Irwin, Va.

of salt. Eight tablespoons of sage, five tablespoons of black pepper, half a teaspoon of cayenne, one grated nutmeg. Scatter the seasoning over the ground meat and mix it with as little kneading as possible.

TOMATO SALAD.

Cook a can of tomatoes until soft. Put them through the colander. Soak a half box of gelatine in a cup of water. Add this to the tomatoes and stir until thoroughly dissolved. Of course the tomatoes must be hot when the gelatine is put in. Add salt, pepper, a pinch of cayenne, and a teaspoon of onion juice, pour it into small cups, and when cold turn them out on crisp lettuce leaves and serve with mayonnaise.

TIPSY PARSON.

Bake a sponge cake in a mold and set it aside for three days, then it is stale enough. Cut off the top very carefully, taking care not to break it. Now scoop out all the inside of the cake, leaving it about an inch thick on the bottom and sides. Moisten this with wine put on in spoonfuls. Make a filling with a pint of rich cream brought almost to the boiling point, in which a half box of gelatine is to be dissolved. The gelatine must be soaked in half a box of cold water for two hours before using. Sweeten the cream with bitter almond or orange extract. When it begins to cool churn it to a stiff froth, fill the cake and replace the top. Set it on ice until the next day and serve with a custard made with a pint of milk, three eggs, half a cup of sugar and a teaspoon of vanilla.

JELLY CAKE.

Six eggs beaten separately very light. Half pound of butter. Half pound of sugar. One pound of flour, with one teaspoon of baking powder sifted twice. One cup of milk. Cream the butter and sugar and the yolks of the eggs together. Stir in the milk and add alternately the flour and the white of the eggs. Season with vanilla and bake in thin jelly cake pans. While hot spread a thin layer of jelly on each layer and pile at once.

BOILED ICING.

One pound of sugar dissolved in one small cup of boiling water and set on the stove to boil until it threads, then pour it over the whites of two eggs. (Do not beat the eggs but simply break them up.) Beat hard until it begins to thicken and then add a pinch of baking powder and stir it in well, spread quickly on the cake.

CARAVEN.

There is much of technical information, and much information that if carefully studied and followed cannot but result to increase profits for any poultry man, in the new Victor Book just issued by the Geo. Ertel Co. of Quincy. In addition to being a complete catalogue of their lines of incubators, brooders and poultry catalogues, there are nearly fifty pages of facts and figures, hints and helps, by which any poultryman, especially the novice, can profit.

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Products Are Good

Scotch Collies.

Among the famous sires now at Filston are Lord Tweedmouth, sire of Dorothy C. and many notable prize winners; Filston's Galopin, Filston's Hero and many others, representing the best collie blood ever brought to America.

These dogs are at stud, or puppies of this choice stock may be procured from time to time. Correspondence solicited.

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By Imported Sires. Sable and white and tri-colors. Prices \$8 to \$15. Older ones correspondingly low. Book on Training, 50 cents: FREE if you buy a Collie. MAPLEMONT STOCK FARM, Albany, Vermont.

BUILD YOUR OWN INCUBATOR



You can do this easily with common tools and save more than half. Our complete book of plans instructs fully. We sell you at cost all fixtures like tank, lamp, regulator, etc. No experiment. Handsome catalog free. CHANNON, SNOW & CO., Dept. 155 Quincy, Ill.

Rhode Island Red and White Wyandotte

COCKERELS

FOR SALE. Good stock and fine birds. Also 2 yr. old ESSEX BOAR. J. W. MORRIS, Waldrop, Va.

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M. BRONZE TURKEYS, GOLDEN and SILVER PENCILED HAMBURG and BARRED PLYMOUTH ROCK Chickens. Eggs in season. For sale by T. J. WOOLDRIDGE, French Hay, Va.

MAMMOTH BRONZE TURKEYS

FOR SALE Apply to
R. E. CREE, Crozet, Va.

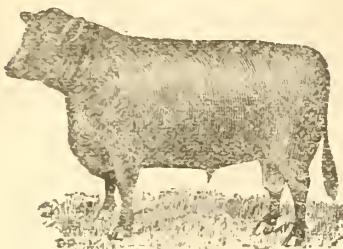
Hawksley Stock Farm

has 2 nice Berkshire Boars for sale, 6 mos old; will have no more pigs to sell until April. A few S. C. B. Leghorn Cockerels left a \$1 each. Eggs in season. J. T. OLIVER, Allen's Level, Va.

WIRE \$1.40 PER 100 LBS.

SMOOTH GALVANIZED WIRE
put up 100 lbs. to a bale, gauges from 11 to 1/2 inclusive. Lengths running up to 250 ft. Per 100 lbs. \$1.40. Fence staples, sizes, per 100 lbs. \$2.00. Wire walls, as stated in a keg, per 100 lbs. \$1.70. Barbed Wire, per 100 lbs. \$2.60. Poultry Netting, Field Fence, etc., at low prices. Ask for free catalogue No. 1 on merchandise of all kinds from Sheriffs and Receivers sales CHICAGO HOUSE WRECKING CO., 35th & Iron Sts, Chicago.

ANGUS CATTLE FOR SALE Low Considering Quality.



1 Reg. Bull, very fine, 10 mos. old.
1 Reg. Bull, 6 mos old. 1 Reg. Bull, 4 mos. old. Lot of 5 grades bull calves.
1 bull calf out of a Hereford cow by Reg. Angus bull 5 mos.

The above stock are as fine as can be found in Virginia, and will be sold reasonable.

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male calves from 6 to 9 mos. old, sired by a bull weighing over 2,000 lbs.

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JANNET'S KING, 48271, greatest son of Valiant Knight II., 29331, first prize bull at all three of the International shows, heads the herd. Visitors and correspondence invited. Young things for sale.

Choice Aberdeen - Angus



Selections from best families imported and home stock. Good breeders for sale with pedigree, conformation and constitution.

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MONTEBELLO HERD ABERDEEN-ANGUS CATTLE

FOR SALE—2 Registered Bulls, calved Dec. 17th, 1902, and Aug. 28th, 1903.

Berkshire Pigs,
(Biltmore Strain.)
farrowed May 1903. For terms, apply to
L. H. GRAY, Orange, Va.

MAGAZINES.

THE CHRISTMAS REVIEW.

The fourteenth annual Christmas number of the Horse Review was published December 15. As this has been the most marvellous year in turf annals, and will be known for all time to come as the "two-minute" year, it was the endeavor of The Review to commemorate same by a Christmas paper in every way worthy of the season of which it is to be a souvenir.

The cover, in six colors and gilt, is the most brilliant in conception and superb in execution of any ever made for a Christmas edition. Inside is presented a table of contents providing a feast for horsemen of unequalled pictorial splendor and literary and statistical value.

There are supplements of Lou Dillon 1:583, the world's champion trotter, and the first to reach the long coveted two-minute mark; Dan Patch 1:561, the world's greatest pacer, and John A. Mc Kerron 2:042, the champion matinee trotter. These supplements are from duo-type plates, the highest possible point yet reached in the art of engraving. In addition to these there are other supplements of the season's noted campaigners.

All in all, the holiday issue of The Review is the most complete ever attempted, and one certain to please every lover of the horse.

The issue retails at 25 cents per copy, and orders will be promptly filled by The Horse Review Company, 910 Masonic Temple, Chicago, Ill.

The Cavalier, published weekly in Richmond, Va., is a new publication, only recently having made its bow to the public. It is nicely gotten up and its "interior" is even more attractive than its "exterior." All the live topics of the day are ably and breezily handled by Mr. Jeffrey Montague, its editor. The social, horse and story departments are very interesting and are right up to date. The Cavalier compares most favorably with most northern papers of a similar character and should be supported by every Southerner and Virginian especially. Price, \$2.00 a year; 5 cents a copy. We can furnish it along with the SOUTHERN PLANTER for the single subscription price, \$2.00.

One of the signs pictured in Julian King Colford's "The Signs of Old London" in the January St. Nicholas has peculiar interest for all Americans. What is called "The Crown and Three Sugar Loaves" was the sign of the historic house which exported to America the celebrated chests of tea that went into Boston harbor in December, 1773, the first overt act of rebellion in the Revolution. While the contest gave America her independence and set aside the rule of George III., it did not overthrow the business of the oldest tea house in Great Britain. The business is carried on to-day in the

REGISTERED

IMMUNE HEREFORDS.

Sale of 50 head at AUBURN, ALABAMA,
February 17, 1904.

Under the management and auspices of the Alabama State Experiment Station. This consignment is a pick of four of the best herds in Kentucky. Bulls and Females of ages to suit all. IMMUNE to Southern fever by INOCULATION.

For particulars and illustrated catalogues address GILTNER BROS., Eminence Ky., or Auburn, Ala.

We have a choice lot of cows, bulls and heifers for sale at our Kentucky Farms. Prices are reasonable. Write us before buying elsewhere.

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Some Exceptionally Rare Bargains to Quick Buyers.

My herd bull, bull calves and Dorset bucks. Registered stock.

H. ARMSTRONG, LANTZ MILLS, VA.

JERSEY BULL.

"Harry's Jersey King" 45706, FOR SALE. He is beautiful, well developed, weighs about 1,500 lbs., perfectly gentle and fawn color. I bought him from Biltmore Farms, but can use him no longer. Address P. H. HANES, Winston-Salem, N. C.

V.P.I. Farm Bulletin

We are now offering some choice young Bulls of the following breeds:

Shorthorn, Hereford, Aberdeen-Angus.

Write at once for pedigrees and prices.

D. O. NOURSE, Prof. of Agr.
Blacksburg, Va.

ANGUS BULL CALVES

SIRED BY THE

Champion Bull BARON IDA.

These calves are choice individuals.

ENGLISH SETTER PUPS.

Sire and dam prize winners.

WARREN RICE, Winchester, Va.

ANGORA GOATS.

I have 21 grades FOR SALE, cheap; also farm-raised B. P. Rock Pullets at \$6.00 per dozen.

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ANGORA GOATS are handsome, hardy and profitable. For large circular address E. W. COLE & CO., Big Clifty, Ky.

RAW FURS I pay highest prices. Write for price list. J. I. Gied, E. Aurora, N.Y.

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Special prices on bred cows and cows with calf at foot and bred again. These calves are by and the cows bred to the great winning bull, Valley Champion. Some grand young heifers and bulls always on hand and for sale. Registered Duroc Jersey hogs.

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Thoroughbred Horses

AND SHORTHORN CATTLE,

Pure Southdown Sheep and Berkshire Pigs.

FOR SALE. R. J. HANCOCK & SON,
CHARLOTTESVILLE, VA.

WM. T. THRASHER, Springwood, Virginia,

BREEDER OF PURE BRED

Short Horn Cattle and Poland-China Hogs.

FOR SALE: 2 yearling bulls, good ones, ready for service; also some nice Fall Poland-China shoats of both sexes. Come or write.



COOK'S CREEK HERD

Scotch-Topped Shorthorns

Herd Headed by Governor Tyler, 1585 48.
Young Bulls for sale. Inspection and correspondence invited.

HEATWOLE & SUTER, Dale Enterprise, Va.

PURE BRED

Short Horn Calves

from fine Stock. Also

Yorkshire Pigs

of very Prolific Breed.

JAS M. HOGE, Hamilton, Va.

Swift Creek Stock and Dairy Farm

Has for sale a large number of nice young registered A. J. C. C.



JERSEY BULLS AND HEIFERS.

None better bred in the South. Combining closely the most noted and up-to-date blood in America. Bulls 10 to 12 months old, \$25; Heifers, same age, \$35. POLAND CHINA PIGS, \$5 each. Send check and get what you want.

T. P. BRASWELL, Prop., Battleboro, N. C.

••• VIRGINIA FARMS •••

Nice little poultry farm, 100 acres, good house and orchard, \$500 00. Blue Grass, Stock and Fruit Farms. Address PORTER & GATES, Louisa, Va.

same old place as in Revolutionary times. Its sign—the sign of "The Crown and Three Sugar Loaves"—has survived the stress of age and storm and fire. The great fire of London swept within half a block of the shop, but the old sign itself reigns to-day.

The country's business outlook is a subject of compelling interest at the beginning of the new year. This fact is recognized by the Review of Reviews, which devotes a large part of its January number to a survey of the situation. "The New Year: Prosperity or Depression?" is the title of a group of articles in which C. Kirchhoff, the editor of the Iron Age, treats of "The Outlook for Steel and Iron"; R. W. Martin, of "The Prospect for Railway Earnings"; Charles M. Harger, of "Good Crops and Good Times in the West," and F. W. Hawthorne, of "The Promise of 1904 for Trade in General." The same number has an illustrated article on "The Status of the Southwestern Oil Industry," by Day Allen Willey; an account of the long and successful fight waged by science against the Texas cattle fever, by Professor Charles S. Potts; and the story of English walnut culture in southern California, by Elizabeth A. Ward. The magazine is also unusually strong in its biographical articles; the character sketch of Elihu Root, the retiring Secretary of War, by Walter Wellman, is especially noteworthy, while the career of Fourth Assistant Postmaster-General Bristow, the investigator of the postal frauds, is attractively presented by Clarence H. Matson, and the life and work of the late Herbert Spencer, the great English philosopher, are sketched by Professor F. J. E. Woodbridge. The threatened war between Japan and Russia claims attention in the editorial department, as does the Panama situation, while the cartoon department ably supplements the editor's paragraphs on current American politics.

The January issue of the Western Fruit Grower, St. Joseph, Mo., will have a special illustrated article by Professor Waugh, Massachusetts Experiment Station, showing how peach, cherry and short-lived apple trees are planted among permanent trees in apple orchards successfully. This is an important matter to every orchard planter, and the article, with illustrations, will be very helpful and profitable. Subscription price of the Fruit Grower is 50 cents a year.

SALES AT BACON HALL.

Messrs. E. M. Gillet & Son report the following recent sales: Seven Hereford heifers to Dr. W. C. Stubbs, of Virginia (4th order); ten Dorset rams to E. C. Lasater, of Texas. They also write that "the market for registered stock is improving. We can give any one good selections in the Hereford bull line."



Products Are Good

English Berkshires.

Berkshires are the most profitable pigs to raise, because of their great size, early maturity and the fine quality of the meat. Breeders who desire to improve the quality of their stock will be interested in our new folder about the young Filston Berkshires, the progeny of noted English prize winners. Correspondence solicited.

Filston Farm, Glencoe, Md.

BERKSHIRE PIGS

Ready for January delivery, sired by my 18-months-old boar, CAPT. JACK 68623, who now weighs 680 lbs. in only fair breeding condition. The pigs are first-class in every respect and I will ship to responsible parties on approval. Am now booking orders for pigs March farrow by Lustre's Carlisle of Biltmore, 72057, recently purchased from Biltmore Farms.

WOODSIDE STOCK FARM,

Charlottesville, Va.

THOROUGH-BRED....

Berkshire Boars, Dorset Buck Lambs, Jersey Bull Calves.

All stock in best of condition and guaranteed as represented.

F. T. ENGLISH, Centreville, Md.

HOLLYBROOK FARM.

Berkshire Pigs

Are from first-class registered stock, Biltmore strain; have free range and plenty of running water, and are healthy, vigorous stock. Young pigs for sale. Write for prices.

HENRY W. WOOD,

Box 330.

RICHMOND, VA.

Registered P. Chinas
Berkshire,
C. Whites. Fine large
strains. All ages, mated
not a in, 8 week, pigs.
Bred sows. Service boars
and Poultry. Write for prices and free circular.
P. F. HAMILTON, Cochranville, Chester Co., Pa.



FOR SALE OR TRADE

Standard Bred Stallion
BLOOSELLUS

18 years old, over 16 hands, and a very coachy horse. I will sell cheap for cash or trade for young cattle, mules or work horses. This horse is thoroughly broken double and single, a lady could drive him. He has quite a turn of speed, and is an excellent buggy horse. What have you to trade? I will make this horse a bargain to any one who wants him, as I have absolutely no use for him.

Address PERCIVAL HICKS, North Mathews Co., Va.

FOR SALE--My Trotting-bred Stallion

GEORGE BURNS, foaled May 14, 1900. Mahogany bay, star in face, left blind foot white, of good style, easy to handle; will make good breeder. Write for his breeding.

J. TABB JANNEY, Van Clevesville, W. Va.

POLAND-CHINA

Pigs, 10 weeks old, not albinos, for sale; also choice bred and unbred gilts from 8 to 12 mos. old. All sired by a son and grandson of Chief Tecumseh 2d and Chief Perfection 2d; also choice Plymouth Rock Cockerels.

THOS. R. SMITH, Lincoln, Loudoun Co., Va.

BERKSHIRES.

a few YOUNG BOARS for sale.

By Mason of Biltmore II. (6854⁸) from Registered sows—nothing but Biltmore blood in my herd. ROBERT HIBBERT, Charlottesville, Va.

 **O. I. C. PIGS**
FROM REG. STOCK.
FOR SALE. PRICES RIGHT.
F. S. MICHIE, Charlottesville, Va.

Poland-Chinas and Chester Whites

AT FARMER'S PRICES.

S. M. WISECARVER, - - Rustburg, Va.

Ayrshires, Berkshires and Oxford-Downs.

Ayrshire Calves of both sexes, Berkshire Pigs and Boar and 2 Oxford-Down Rams for sale.
MEI ROSE CASTLE FARM,
Enos H. HORN, BREKAKER, CHARNOVA, Va.

WHITE YORKSHIRE PIGS,

Entitled to registration, FOR SALE.

HENRY H. CLARKE "Chantilly,"
Broad Street Road, Richmond, Va.

 **Registered BERKSHIRE**
Boar and Sow, 9 months old for sale, \$30 for the two. Also pure bred PLYMOUTH ROCKS.
F. MAXWELL CONNER
Box 316, Richmond, Va.

.. WOODLAND DORSETS ..

Won 6 first with 8 possible at Columbus, O. 7 out of 8 at Pontiac, Mich., and 6 out of 8 at Grand Rapids, Mich., with strong competition at all three places. Our Fall Lamb crop from Imp. Flower Ram is the finest quality we ever raised.

J. E. WING & BROS.,
Mechanicsburg, Ohio.

CATALOGUES.

Improved Victor Incubators and Brooders, George Ertel Co., Quincy, Ill. This is an excellent catalogue, full of information on topics of interest to poultry keepers.

Price list of tobacco seeds grown by the Slate Seed Co., Hyco, Halifax Co., Va., the pioneer tobacco seed farm of the world, and the originators of many of the best and finest tobaccos.

The Acme pulverizing harrow clod crusher and leveller, Duane H. Nash, sole manufacturer, Millington, N. J. The merits of this harrow are too well known to need commendation. Every farmer ought to have one.

Aspinwall Potato Machinery, Aspinwall Mfg. Co., Jackson, Mich. Cutters, planters, sprayers, diggers, sorters.

California Rose Co., Los Angeles.

Charter Gas and Gasoline Engines, Charter Gas Engine Co., Sterling, Ill. The merits of the engines and combination appliances made by this firm have been fully recognized all over the world.

The Sure Hatch Incubator Co., Clay Centre, Neb., and Indianapolis, Ind. These machines have had a large sale for several years. Send for the catalogue before buying.

F. C. Fleming, breeder and importer of Aberdeen-Angus cattle, West Lebanon, Warren Co., Ind., owner of the noted bull, "Bion," which leads the herd.

American Seeding Machine Co., Springfield, O., almanac for 1904. This almanac will be found very useful for farmers and stock breeders, as it contains gestation and other tables, and much useful information.

Studebaker's Farmers' Almanac and weather forecasts for 1904, and handsome lithograph of typical American show horses. This almanac is an annual feature of the Studebaker Co., and has become well known amongst farmers as always containing much useful information. The Studebaker Bros. Mfg. Co., South Bend, Ind., will send it on application.

Presbyterian Committee of Publication, Richmond, Va., catalogue of fine Bibles, gift books and calendars.

The World's Commerce and American Industries graphically illustrated by 86 charts, published by The Philadelphia Commercial Museum, Philadelphia, Pa. Price, 50 cents.

PRESERVING SAUSAGE.

Make your sausage to suit your taste and as free as possible from water. Place in pan with fresh lard, stirring all the time till fully cooked but not crisped. Be satisfied all water is out, have fruit jar hot, pack tightly in the jar, allowing the hot lard to cover the sausage, fasten tightly and you can have fresh sausage the year round. Have tried all other receipts mentioned but the above is perfect.

MRS. JOHN H. WILLIAMS and
MISS LENA MEATHEMAN.

Booneville, N. C.

150 Jacks, Jennets and Mules.

Best assortment I ever owned. Can suit you exactly. Write for description and prices. Also will sell 2 Percheron Stallions at close figures.

BAKER'S JACK FARM,
Lawrence, Ind.

Knight & Jetton,

Breeders of and Dealers in

Jacks, Jennets, Stallions.

Durbam and Hereford
YEARLINGS.

Send stamp for Catalogue.
Murfreesboro, Tenn.



Jacks, Jennets and Stallions

FOR SALE. FINE JACKS A SPECIALTY. Write in writing state exactly what you want or come and see our stock.

W. E. KNIGHT & CO.,
Route 5. Nashville, Tenn.

A CHOICE SELECTION OF COCKE'S = PROLIFIC

Seed Corn for sale; a corn producing many ears to the stalk, growing from 10 to 12 feet high, making much forage and an excellent ensilage corn.

H. E. WOOD, Bremo Bluff, Va.

One 320-egg Prairie State Incubator, and one F. C. Standard Incubator, 220-egg capacity, both practically new, will be sold cheap. Apply to

F. E. WILLIAMS, M. D., Ivy Depot, Va.

 **INCUBATOR ORPHANS FIND A GOOD STEPMOTHER IN
New Idea Brooders**
More good points than any other. Raises 100 pr. cent of healthy chicks. Complete fixtures cost only \$4.45
You make woodwork and save heavy freight.
Free Catalogue tells all about these & New Idea Incubators
CHANNON, SNOW & COMPANY, BOX 155, QUINCY, ILLINOIS.

YOU CAN MAKE \$3 TO \$10 A DAY
 Fitting glasses for us. Big profits.
Our 24-page **FREE EYE BOOK** tells how. Write for it today.

JACKSONIAN OPTICAL COLLEGE, Dept. 2093, Jackson, Mich.

SHU-LIFE

makes shoes entirely waterproof and gives double wear.

Greatest money saver ever discovered.

Reduces the Shoe bills one-half. Prevents rheumatism by keeping the feet perfectly dry, and saves money on every pair of shoes. For harness there is nothing equals it, as they can't get wet, toughens the fibre and makes them easy to clean. A large sample for 10c. in stamps. Write to-day. Guaranteed. Manufactured by

SHU-LIFE CO., Box 363, Lynchburg, Va.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

BILTMORE FARMS

Annual Brood Sow Sale,

FEBRUARY 9, 1904.

70 - Head of Imported Large English Berkshires - 70.

Our 1903 Importation will be offered at unreserved auction on the Farms, Col. R. R. Bailey, Auctioneer; sale held under cover.

65 Selected Brood Sows all guaranteed safe in pig to the greatest English and American boars.

5 Selected Boars, including champion boar, English Royal.

All either prize winners themselves or bred by prize winners.

This offering has been selected without reserve; without limit as to price, and is from the herds of the leading English breeders, such as Edney Hayter, R. W. Hudson, His Royal Highness Prince Christian, and C. C. Smith, Philo L. Mills, J. A. Fricker, etc., and will be sold absolutely without any reserve price, if only one bid is made.

INDIVIDUAL MERIT. Visiting breeders who have recently inspected the offering unite in the verdict that no such collection of Berkshire Brood sows has ever been gathered together at any one place, or can be found in any other breeding establishment. They have even more size and uniformity of type than our last importation, good as that was, and in addition the greatest possible care has been taken to exclude all that did not indicate the best of constitution and feet; early maturity, extra finish and style combined with good heads, backs and hams. In short, they are the kind that cannot be found every day, and that we confidently expect will be approved of in the sale ring by the expert judge and will well repay both our efforts and the investment of time and money for the breeder to secure.

BLOOD LINES. Only the best of the tested reproducing English families are represented. These we have proven here for many years, and have given great results in the hands of other American breeders, and they are families which are producing the winners for many years at the leading English Shows. They are not the results of any experiments which we do not wish to try here or induce our patrons to try. Among the prominent families are those of The Huntress, Loyal Berks, Handley Cross, First Catch F., through Manor Favorite, Swansea, Blenheim, Rubicel, through Queen of Hearts, First Rank F., Highclere Topper and His Majesty. Ten great boars, which include the Champion at the English Royal, also the Champion at the Pan-American, and many other prize winners will be used on these sows, selected to nick to produce the best litters that many years' experience with these blood lines indicate.

CATALOGUE will be ready for mailing early in January. **MAIL BIDS** will be carefully and conscientiously treated by the Farms; or, if selection of an outside expert is wished, write Mr. Geo. W. Jessup, Rockville, Ind., who has kindly consented to act in this capacity.

SPECIAL RAILROAD RATES of one and one-third fares for the round trip can be secured from all points north of the Ohio and west of the Mississippi rivers by calling for Winter Tourist's Tickets to Asheville (1½ miles from the Farms). For further particulars address

BILTMORE FARMS, Biltmore, N. C.

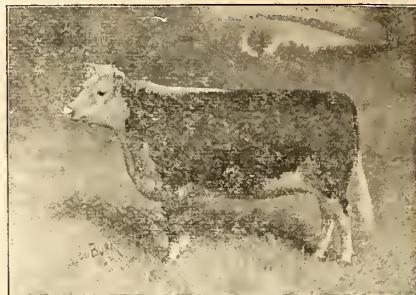


LYONS GAP HEREFORDS

—OWNED BY—

HAYNES L. MORGAN, Saltville, Virginia.

Herd headed by the celebrated breeding bull **MARMADUKE 90033**. I am offering for sale at **Attractive Prices** a few young bulls of serviceable ages, well bred, good individuals and in splendid sale condition, including some prize winners at the recent District Fair at Radford, Va.

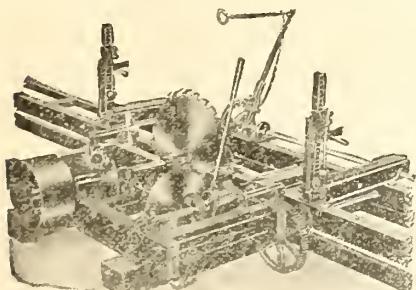


JENA 131611.

Farm easily reached either from Chilhowie on main line, or Saltville on branch N. & W. R. R., distance from former five and latter three miles. Inspection of the cattle invited. Visitors welcome. Correspondence solicited Telephone in residence.

THE DE LOACH PONY SAW MILL.

The illustration herewith, is of a small size saw mill manufactured by the De Loach Mill Manufacturing Company, of Atlanta, Ga., who advertise regularly in our columns. It is known as their Pony Saw Mill, which will run with as low as four horse power and cut 2,000 feet a day, thus well adapting it to the individual lumberman's use. It can be operated as well with any horse power up to 20 and reach a capacity of 10,000 feet of



inch boards a day. We give the illustration merely as a suggestion of the business of the De Loach Company. They manufacture a long line of mills of all capacities. They have the largest saw mill manufacturing plant in the world, and being located in this new Southern city where labor is cheap, and the best materials of every character are abundant, they have every facility for turning out, as they undoubtedly do, the best line of saw mills in the world, at low prices.

They also utilize this wealth of resource to the full in making shingle, lath and planing mills, edgers, water wheels, grinding mills, gearing, etc. It is a good concern to look to for every article of machinery of this general character.

A large saw mill and a general machinery catalogue giving detailed information will be sent free to any one writing for it.

DE LAVAL CALENDAR.

The De Laval Separator Co., of New York City, send us a very beautiful calendar, which we acknowledge with thanks.

REGISTERED HEREFORD CATTLE.

Service Bulls; **Imported Salisbury 76059** (19083), a grandson of the famous Grove 3d 2490, and a descendant of the world renowned Lord Wilton 4057 from the 4th generation. Snowball, the dam of Salisbury, is now in the herd of His Majesty King Edward VII.

Lars, Jr., is by La's of Western fame and his dam is Judy out of a Sir Richard 2nd cow. This makes a great combination of the Grove 3d, Lord Wilton, Anxiety, Peerless Wilton and Sir Richard 2nd strains. No better breeding in the world today, FOR SALE—Yearling bulls by above sires. WANTED—Reg Hereford heifers, 18 to 24 months old, **not bred**; will exchange bulls for heifers of equal quality. Extremely low prices to close out this bunch; only a few left. Write your needs or call and make your own selection.

MURRAY BOOCOCK, Owner, Keswick, Alb. Co., Va.

KESWICK is on the C. & O. Ry., near Charlottesville, Virginia.



Bacon Hall Farm.

Hereford Cattle -:- Berkshire Hogs

REGISTERED—ALL AGES.

Toulouse Geese, Muscovy Ducks.

MOTTO: Satisfaction or no sale.

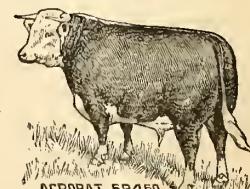
E. M. GILLET & SON, - Glencoe, Maryland.

ROSEMONT HEREFORDS.

HEADED BY
THE FAMOUS **ACROBAT 68460**,

SPECIAL NOTICE! 10 nice, well-bred heifers, safe in calf to Acrobat, will be sold at very reasonable figures.

C. E. CLAPP, Berryville, Clarke Co., Va.



THE OAKS

Has for sale, the grand Shorthorn bull, "Rock Hill Abbotts-BURN" 155113, a grandson of Mary Abbottsburn 7th; also a nice lot of CALVES, BULLS and HEIFERS; 2 Reg. MORGAN COLTS at a bargain.

B. B. BUCHANAN, Bedford City, Va.

VIRGINIA**..Registered Herefords..**

Annefield Herd Headed by

PRINCE RUPERT, 79539.

GRAND CHAMPION, KANSAS CITY, 1901.

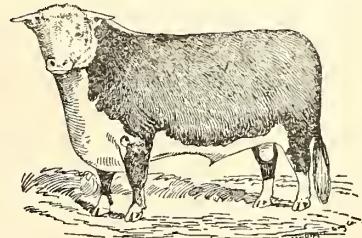
Correspondence Solicited. = = Inspection Invited.

EDWARD G. BUTLER, "Annefield Farms,"
BRIGGS, Clarke County, Virginia.**SPECIAL SALE OFFERING**

AT VERY REASONABLE PRICES.

Four fine bull calves, 6 to 10 months old. Also a few cows bred to the champion, Prince Rupert.

Large illustration of Prince Rupert sent FREE on request.

**LOOKING FOR FLAWS.**

Charles Lamb tells of a chronic grumbler who always complained at whist because he had so few trumps. By some artifice his companions managed to deal him the entire thirteen, hoping to extract some expression of satisfaction, but he only looked more wretched than before.

"Well, Tom," said Lamb, "haven't you trumps enough?"

"Yes," grunted Tom, "but I've no other cards."

This chronic grumbler of Lamb's is found in endless variety. Perhaps the most numerous of the species is represented by the man who is always looking for flaws—one of those blue-spectacled people who see nothing but mud when they look on the ground and only clouds when they look at the sky. One of those gentlemen was once asked to look at the sun through a powerful telescope and describe what he saw.

"Why," he said, after a few moment's study, "I see nothing but a few black specks!"—*Success.*

DISINFECTANTS.

The Gibson & Lamb Co., West Alexander, Pa., send us circulars setting forth the merits of their disinfectants and lice killer. This firm is a new advertiser in this issue and we invite our readers to investigate the merits of their goods.

HOLSTEIN-FRESIAN BULLS

We Offer the Following BULLS at Bargain Prices:

SIR HENRY NETHERLAND ABEKERK, 33130, 3 years old; perfectly quiet and gentle.

1 BULL, 15 months old, sired by Clothilde Monks Count 2nd; 8 YOUNG BULLS from 3 to 6 months old, sired by Clothilde Monks Count 21494, whose 24 nearest female ancestors gave 15,627 pounds of milk in a year, and have butter records of 21 pounds 2 ounces in a week.

COME AND GET SOMETHING GOOD

THE GROVE STOCK FARM, Burkeville, Va.

Jersey, Guernsey and Shorthorn**CATTLE**

Young stock registered in their respective Herd books, for sale. The SHORT HORNS are bred and owned by a neighbor, and are in our hands for sale. A number of young BERKSHIRE SOWS due early in the year. BARRED PLYMOUTH ROCKS, S. C. BROWN LEGHORNS, a few BRONZE TURKEYS, TOULOUSE GEESE and PEKIN DUCKS. All of above ready for delivery.

M. B. ROWE & CO., Fredericksburg, Va.

REPORTS.

U. S. Department of Agriculture, Washington, D. C. Report of the Secretary of Agriculture, 1903. This is a most valuable and instructive document, and worthy of the careful perusal of all farmers. It shows pointedly how much this great country is the debtor of the farmers. They provide the surplus products which enable the bills to be paid for what the people of the country buy from abroad. The export trade in farm products for 1903 was valued at over \$878,000,000. During the 13 years, 1890-1902, the average annual excess of domestic exports over imports amounted to \$275,000,000, and during the same time the annual average in favor of farm products was \$337,000,000, from which it is apparent that there was an average annual adverse balance of trade in products other than those of the farm amounting to \$62,000,000, which the farmers offset and had left \$275,000,000 to the credit of themselves and the country. In 1903 the balance in favor of the farm products was still better, the excess of farm products in that year being \$422,000,000, sufficient to offset the unfavorable balance of \$56,000,000, and leave \$367,000,000 to the good.

Report of the Editor for 1903.

Office of Secretary. Circular 10. Standards of Purity for Food Products.

Bureau of Animal Industry. Circular 42. Information Concerning Common Goats.

Bureau of Plant Industry. Bulletin 48. The Apple in Cold Storage.

Office of Experiment Stations. Experiment Station Record, Vol. XV., No. 4.

Farmers' Bulletin, 35. Potato Culture.

Farmers' Bulletin, 42. Facts About Milk.

Farmers' Bulletin, 60. Methods of Curing Tobacco.

Farmers' Bulletin, 82. The Culture of Tobacco.

Farmers' Bulletin, 120. The Principal Insect Affecting the Tobacco Plant.

Farmers' Bulletin, 141. Poultry Raising on the Farm.

Farmers' Bulletin, 151. Dairying in the South.

Farmers' Bulletin, 156. The Home Vineyard.

Farmers' Bulletin, 162. Experiment Station Work.

Farmers' Bulletin, 179. Horse Shoeing.

Farmers' Bulletin, 182. Poultry as Food.

Cornell Experiment Station, Ithaca, N. Y. Bulletin 212. Second Report on Co-operative Records of the Cost of Producing Eggs.

Bulletin 213. Methods of Milking.

HOG BOOK FREE

"HOGOLOGY," my book about hog raising, will be sent FREE, if you mention Southern Planter when asking for it. It has been revised and enlarged, contains 100 pages, fully illustrated, practical and complete, and worth many dollars to any swine raiser.

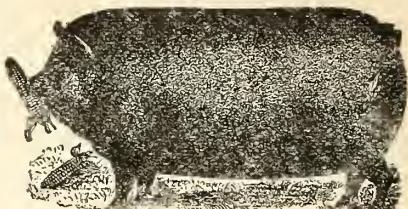
I PAY FOR ALL HOGS THAT DIE when my Remedy is fed as a preventive. Write for plan. 27 years unparalleled success and the biggest money-maker for hog raisers known.

It will Prevent and Arrest Diseases, Expel Worms, Stop Cough and Pay for Itself Many Times Over by the Extra Flesh Produced without Extra Feed.

PRICES: 25-lb. can, \$12.50; 12½-lb. can, \$6.50, prepaid; packages, \$2.50, \$1.25, and 50 cents. None genuine without my signature on package or can label.

THOUSANDS OF TESTIMONIALS from leading breeders and feeders who have used it regularly for years.

Mr. G. H. Frey, Odeholt, Ia., under date of November 19, 1903, writes: "I have been a user of your Remedy for a long time, and find that I cannot get along without it and raise hogs successfully. I raise from 100 to 500 hogs a year, and can certainly recommend your Remedy."



TRADE-MARK.

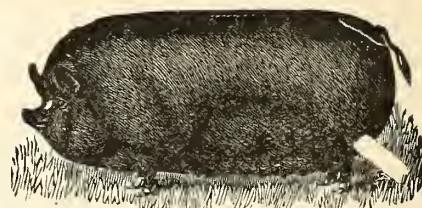
JOS. HAAS, V. S., Indianapolis, Ind.

Hill Top Stock Farm.

BERKSHIRE HOGS and SOUTHDOWN SHEEP

—A Specialty.—

S. Brown Allen, who succeeds H. A. S. Hamilton & Co. in the ownership and management of this celebrated Stock Farm, with increased facilities, will make a specialty of breeding Berkshire Hogs and Southdown Sheep, without regard to cost, from the purest and most royal strains of imported blood.



My BERKSHIRE PIGS

For this Fall delivery will weigh 100 pounds at 12 weeks of age, and for INDIVIDUAL MERIT cannot be excelled in the United States. They will make show hogs against any and all competitors and are being engaged every day.

S. BROWN ALLEN, Staunton, Virginia, (Successor to H. A. S. HAMILTON & Co.)

"BRED-IN-THE-PURPLE."

~DUNTREATH~
BERKSHIRES.

THE VERY BEST—The whole story in three words!

A limited number of young stock for immediate shipment.

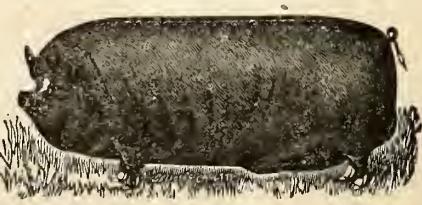
Farmer's winter prices for January orders. Orders booked now for Spring shipment. Money cannot buy better breeding.

DUNTREATH STOCK FARM, Richmond, Va.

We **positively guarantee** to breed and ship the **VERY BEST** strains of thoroughbred registered **LARGE ENGLISH BERKSHIRE** Hogs for **LESS MONEY** than any other firm in the U. S., the superiority of our stock considered. Send us your order and we will satisfy you both in price and stock.

WALTER B. FLEMING,

Proprietor of the Bridle Creek Stock Farm, Warrenton, N. C.



EMILY'S CHARGE.
A Serial Tale by Mary Washington.
CHAPTER XII.

One day, about a year after the orphans had invested in their little grazing and fruit farm, Mr. Wheeler reported on returning from an expedition to the Springs, that they were going to have a new resident physician there, as the old one had grown too old and feeble to attend to his duties.

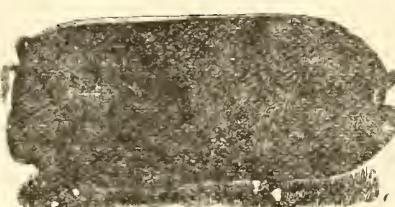
The following Sunday at church, they saw a strange face amongst the familiar ones of the congregation, from which they concluded that the new physician had arrived. He bore the name of Ellis Gordon, had a fine expressive face, and seemed to be about 28 years old. It was some time before they formally made his acquaintance, but before he knew them personally, he had learned to watch with interest for the fair sisters to come in and take their places in church. Emily was now twenty-seven, but she had been kept fresh and lovely by a simple and primitive life, early hours, the bracing mountain air, and above all by a pure and tranquil inner life. Alice was 17, in the earliest bloom of young womanhood, taller and more striking in appearance than Emily, but very much like her. There was between the two sisters much the difference we observe in the same landscape scene beneath April and June skies.

The neighbors soon made Dr. Gordon acquainted with the history of the orphans, and then he watched for them with more interest than ever. As he passed along the road, he occasionally had a flitting view of Alice and Emily tending their flowers, and either one of them, he thought, might well personate "the Gardener's Daughter." The first time, however, that he formed any personal acquaintance with them was at an entertainment given by a lady in the neighborhood. This was a dancing party, the first Alice had ever attended, and Emily smiled when she saw how extravagantly her young sister enjoyed herself, and how she seemed to know intuitively how to dance, as a swan knows how to swim, or a bird to soar. Emily, too, enjoyed the entertainment so vividly as to astonish herself, and to convince her that her youth and freshness were not yet overpast. To Alice it had the charm of novelty; to Emily that of old familiarity, and we are so constituted that both of these things delight us. Emily had had, at least, a brief experience of social gayeties, in the first flower of her youth, and though she had had to forego such things since, she still had a capacity for "young joy" lying latent in her nature.

For the Sake of Your Horse or Mule

Ask your Druggist or Dealer for a copy of Dr. Daniel's book on *Home Treatment for Horses and Cattle*. It costs you nothing if you get it of them. It gives you the symptoms and tells you how to cure the common ills. If your druggist will not get it for you send to

DR. A. C. DANIELS, 172 MILK ST., BOSTON, MASS.



BERKSHIRES.

I have just added to my herd, 2 new Imported and extremely fancy BOARS; 1 bred by J. A. Fricker, Burton Mere, Wiltshire, Eng., and the other from the herd of R. W. Hudson, Danesfield Eng. Imported Sir John Bull and Uncle Sam are still in my herd. I made a large shipment of pigs Nov. 17th, having orders from New York to Mexico. I never was as strong on boar pigs as NOW. Both pigs and price will suit you. Be sure to start with a new boar for Spring litters.

THOS. S. WHITE, Fassifern Stock Farm, Lexington, Va.

Remember me when pricing SHORTHORNS (Durhams). I also offer 4 cars of bright timothy hay.

BERKSHIRE PIGS

From the herd where they grow to 200 pounds at 6 months. Trio, \$25.

A few JERSEY BULL CALVES from cows making 360 to 400 lbs. butter per year. If you wish to improve your herds, better buy your stock here.

Forest Home Farm,
Purcellville, - - - Virginia.

BERKSHIRES.

ANNEFIELD HERD

Combines Best English and American Strains. Prices Reasonable. Young Stock For Sale at all times.

EDWARD G. BUTLER, - - - Briggs, Clarke Co., Va.

DON'T BUY GASOLINE ENGINES

UNTIL YOU HAVE INVESTIGATED
"THE MASTER WORKMAN"

A two-cylinder gasoline engine; superior to all one-cylinder engines. Costs less to buy and less to run. Quicker and easier started. Has a wider sphere of usefulness. Has no vibration; can be mounted on any light wagon as a portable. Weighs less than half of one-cylinder engines. Give size of engine required. Sizes 1½, 2, 2½, 4, 5, 6, 8, 10 and 15 horse power. Mention this paper. Send for catalogue. THE TEMPLE PUMP CO., Meagher and 15th Sts., CHICAGO.



Products Are Good

their herds with the finest blood to be procured. The individuals for sale are as follows:

NOBLE NAME, 61427, A. J. C. C.

By Nobleman, winner of First over Jersey in '98 and Reserve over Jersey in 1900, out of Golden Phenomenon, another noted Island winner. Noble Name has 25 per cent Golden Lad blood by each parent. Bred by A. J. Arthur, St. Ouen. Dropped March 27, 1901. Now in his third year, and at the beginning of his usefulness.

GOLDEN FERN'S F X, 67458, A. J. C. C.

Another grand young imported bull, a son of Flying Fox, sold to Thomas W. Lawton in 1902 for \$7,500, and a grandson of Sultana Rosette, one of the most famous cows ever produced on the Island. Bred by Philip Le Mourat, St. Saviour. Dropped January 11, 1901.

GOLDEN PETER, 57426, A. J. C. C.

A bull of splendid breeding and of proved quality as a sire. His pedigree traces twice to Golden Lad, and twice to Wolsey. Bred by A. Le Gallais, St. Brelades. Dropped October 5, 1899.

*Write for full information concerning any of the above.
Pedigrees with photographs will be forwarded on application.*

HEIFER CALVES.

It has not hitherto been possible to secure heifer calves of Filston breeding, as it has been the policy of the management to reserve all heifers for the home herd. It has now been decided to spare a limited number from each year's increase. As this number is small, possible purchasers should inquire at once as to breeding, prices, etc. Address

FILSTON FARM, GLENCOE, MARYLAND.

GEO. A. SWARTWOUT, *Manager.*

Amongst the pleasantest of the guests she met was young Dr. Gordon. Indeed it was a refreshing and stimulating thing to her to meet with so cultivated and well bred a young man, after leading so isolated a life as she had done for years. She had so long been in the habit of training and stimulating the minds of others that it was a new and delightful experience for her to come across some one who could stimulate her mind, and give her new and striking ideas about books, life and things in general. Altogether the meeting marked quite a new era in her simple, uneventful life.

The following winter the orphans met with the severest trial they had experienced since their mother's death. Alice was taken with inflammatory rheumatism, and was so ill that Emily could not attend to her school, but had to dismiss it. They sent for the doctor who had been the former resident physician at the Springs, but he being too feeble to obey the summons, sent his successor, Dr. Gordon. This was the latter's first visit to the orphans, strange to say, for though he had shown such undisguised pleasure and interest in the acquaintance at the dancing party, he had seemed rather

LARGE YORKSHIRE HOGS

THE COMING BACON BREED—
THE MOST PROLIFIC BREED—

48 pigs from four litters, ready for December delivery—our Fall prices always the lowest.

INDIAN GAMES, the fashionable table fowl.

WHITE LEGHORNS, the greatest layers.

WHITE WYANDOTTES, the best all round fowl. Also

JERSEY BULLS and HEIFERS from cows with recorded butter tests of 18 to 24 lbs. in 7 days.

BOWMONT FARMS, Salem, Va.

Black Leg Vaccine
PASTEUR VACCINE CO. CHICAGO SAN FRANCISCO.

When corresponding with our advertisers always mention the
Southern Planter.

to avoid and shrink from them since. The circumstances under which he now entered their little home, enabled him to become better acquainted with the orphans in a short time, than he could have done in several years, under ordinary circumstances. Nothing breaks down the barriers of conventionality like severe illness. The world and the body seem to recede, and we speak to one another, heart to heart, and soul to soul, when we are ill ourselves, or have a loved one who is so. Natural life and its concerns seem so fleeting, so shadowy. It is no time for disguises or conventionalities.

Alice's illness was long and severe; at one time, it was extremely critical from the rheumatism being so close to her heart, and there seemed to be scarcely one chance in a thousand for her to escape. During this time, Dr. Gordon gave up all other practice, and remained at the cottage day and night till the crisis was past. From a professional point of view, it was an absorbing and exciting game, played with the powerful adversary death for the priceless stake of life, and besides this, there was a sentiment of human interest in the lovely young girl he was striving to rescue—and almost without his volition and consciousness, there had crept in a still stronger feeling of interest in the older sister. During the unreserve which almost necessarily prevails in dangerous illness, Dr. Gordon had had an opportunity to know Emily well, to see and appreciate her loveliness, her heroism and her nobility. Merely to see a woman in distress is a strong appeal to a chivalrous nature, and especially when that woman is so rare a creature as Emily. In short, before he knew it, his heart had become hers, and he waked up one day to the consciousness of loving her with passionate warmth, and it gave him exquisite pleasure when he saw how implicitly she relied on him for counsel and aid in her distress and anxiety about her sister. But alas! he was so situated that his love for her, instead of being an unalloyed joy, brought pain and perplexity along with it. He had had some foreshadowing of this, even on his first meeting with her, and for this reason, had refrained from following up the acquaintance till as a matter of duty and humanity, he went to visit Alice as a physician; but the causes of this avoidance, we will unfold to the reader, a little later.

At length, after many many days of anxiety and nights of watching, Emily and Walter were overjoyed by Dr. Gordon's telling them that Alice might now be considered out of danger. "Under God," exclaimed Emily, with irrepressible emotion, "we owe her safety to you!" She could say no more; the tears streamed so fast from her lovely eyes, and indeed, words seemed to her so poor and inadequate on such a subject. She had not overrated his services. His skill and un-

Established 1828.

75 Years.

BUIST'S GARDEN SEEDS.

OUR SPECIALTY is the growing of Garden Seeds from Selected Seed Stocks. The great importance of following this system for the production of Seeds to insure fine vegetables is familiar to all gardeners; if vegetables from which seeds are grown are inferior or impure, so must their product be.

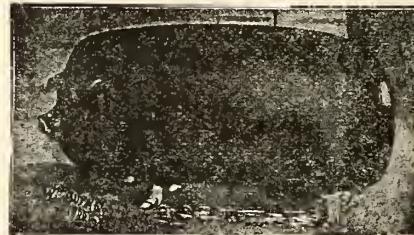
IF YOU HAVE a Garden, send for **Buist's Garden Guide** for the South; edition for 1904 now ready.

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SEED GROWERS, **PHILADELPHIA, PA.**

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GRAY'S BIG CHIEF, 57077

I have a limited number of pigs by my fine boars Gray's Big Chief, 57077; and Victor G, 57075, and can furnish pairs not akin or related to those previously purchased. Young boars and sows of all ages. Send to headquarters and get the best from the oldest and largest herd of Poland-Chinas in this State at one-half Western prices. Address

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POLAND- CHINAS...

The kind that grow large, choice boars, bred sows and pigs of very best breeding and individuality. Stock guaranteed as represented and if not entirely satisfactory may be returned at my expense. Write for prices and testimonials. Also SHORTHORN BULL CALVES.

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Pigs from 4 to 6 months old. Boars ready for service, and young sows with pigs. Tamworth pigs 8 wks. old \$5. Prices Reasonable. Apply to

J. C. GRAVES, Barboursville, Va.

remitting efforts had been, humanly speaking, the means of rescuing her sister. He had a marked talent and keen enthusiasm for his profession which gave him an insight into disease and capability of coping with it which many older physicians lack. By the time the warm spring sunshine had brought out the flowers. Alice was fairly convalescent, and Emily was conscious of finding a deeper interest and significance in life than ever before. Everything seemed to breathe a mysterious sweetness, and hint of a vague hope and joy. Involuntarily she found herself repeating Tennyson's lines—

"It seems that I am happy—that to me
A livelier emerald twinkles in the
grass,
A purer sapphire melts into the sky."

But before long, the emerald and sapphire began to grow a little dimmer, as she began to miss the visits of one whose society had grown very important to her. Dr. Gordon's visits at the cottage were abruptly discontinued, and Walter found on enquiry that he had gone off on a sudden journey. The last visit or two he had paid at the cottage, Emily had noticed something strange in his manner, a constraint, an abruptness, an inequality she had never noticed before. He did not apprise her of any intended journey. She supposed, therefore, that he had been suddenly called off by unexpected business, but would soon return.

One evening, however, as she was hending over her flower beds, Walter came up, saying excitedly, "Old Dr. — says he has just had a letter from Dr. Gordon saying he was going to resign his position here and move to the West."

It was well her face was turned away so that Walter could not see the deadly pallor that overspread it. At that moment, it was clearly revealed to her that she had lived and she had loved.

WHAT SALT WILL DO.

Salt puts out a fire in the chimney. Salt in the oven under baking tins will prevent their scorching on the bottom.

Salt and vinegar will remove stains from discolored teacups.

Salt and sugar are excellent for bee stings and spider bites.

Salt thrown on soot which has fallen on the carpet will prevent the stain.

Salt put on ink when freshly spilled on the carpet will help in removing the spot.

Salt in whitewash makes it stick.

VIRGINIA FARMS.

Messrs. P. B. Buell & Son, Herndon Va., whose advertisement will be found in another column, issue a neat pamphlet describing many valuable properties which they have for sale. Send for it.

In Winter, Feed ARMOUR'S BLOOD MEAL

Your stock don't get enough fresh, nutritious food. Blood Meal with daily rations supplies nutrition. Keeps your stock well. Cures whenever sick.

AN UNFAILING REMEDY FOR SCOURS.

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BARON ROSEBOY 57666 by the world famous
GAY BLACKBIRD heads the herd.

Females by such noted sires as Gay Blackbird, 14443, (sire of the highest priced American bred Angus bull), Ermon 18171, (by the champion sire of females Royal Eric), Eulalies Eric 15568, (2nd prize yearling bull at World's Columbian), Beau Bill 13637 (champion of the West for two years), Baron Ida 20184 (champion at N. Y. State Fair 1898), Baronet of Advia 1226 (hy the "Judge" champion of the world).

Families represented in the herd are Coquette, Queen Mother, Nosegay, Westertown Rose, Old Rose of Advia, Violet, etc. We claim for our herd as good breeding as any herd in America. The individual animals in the herd have been selected with the one aim "quality" in view. Come and see, or write your order and let us guarantee a first-class animal.

Shipping point and depot, Fitzgerald, N. C., on D. & W., 24 miles S.-W. of Danville, Va.

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DUCKS! DUCKS! DUCKS!

Elegant, large Spring hatched PEKIN DUCKS; 300 of the finest you ever saw; of the best strains in America. Don't wait to write just send your order for them at 75c. each, will be closed out in twenty days; also BERKSHIRE PIGS as fine as silk at \$7.50. We guarantee satisfaction. Write

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Best.

THE GREAT WESTERN Manure Spreader

is the only Spreader made that has an ENDLESS APRON and the many advantages which it possesses. It's always in place and ready to receive the load without any turning back either by hand or complicated, easily broken machinery. The front and rear axles are of same length which, with the

Broad Tires Prevents Rutting
of fields, meadows, etc. and makes
wet, dry, frozen, light, chaffy, packed or caked.
Spreads lime, plaster, wood ashes, cotton-seed and
l Hulls, etc. Can be changed instantly to spread thick or thin
while the machine is in motion—3 to 25
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Has the only successful
END GATE AND BEATER AND HOOD PROTECTOR IN USE.
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POSITIVE GUARANTEE as to quality, capacity and durability.
All parts breaking within one year
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Catalogue—the best and most complete spreader catalog ever published.
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ONE RESULT OF INCIVILITY.

William Travers Jerome, district attorney of New York city, in speaking of the necessity of public men exercising courtesy to anybody and everybody, told the following story:

"I want to say, in the first place, that what I am about to relate is not told in order to emphasize the need of politeness on the grounds of mere policy only, but rather to show that an ungentlemanly action is pretty sure to act as a boomerang. Some years ago, a reporter called on a man of wealth and prominence, whom I will call Mr. Blank, in order to interview him in regard to the latter's alleged political ambitions. He was shown into his library.

"'Well?' said the great man.

"The reporter presented his card and explained his errand. Mr. Blank glanced at the pasteboard, deliberately tore it in two, and threw it into the wastebasket.

"'Nothing to say,' he growled, and that was all that the visitor could get from him.

"So the reporter departed with a flush on his cheek and a burning desire in his heart to thrash the discourteous Mr. Blank.

"Several years passed, and Mr. Blank was a candidate for a high municipal office. Meanwhile, the reporter had been made political editor of a journal whose views were opposite to those of Mr. Blank. In that capacity he again called on Mr. Blank, and found him suave and silky. The editor did not forget the torn card. The incident rankled within him.

"So it came about that he made such a tremendous fight against Mr. Blank's election that, mainly through his efforts, he suffered an overwhelming defeat.

"A single act of unnecessary rudeness cost him position and power."

BALAAM WAS AN IRISHMAN.

Matthew J. Donohue, a Tammany district leader, tells the following story of an Englishman and an Irishman who were discussing the old race question:

"Whin Engla-and wants a raily good man, she's got to go to Ireland to git him," said the Irishman. "Look at Roberts. Look at Kitchener. Both Irish."

"I suppose you think Wellington was han Irishman," said the Englishman.

"Shure!"

"Hand Ne'son."

"Shure!"

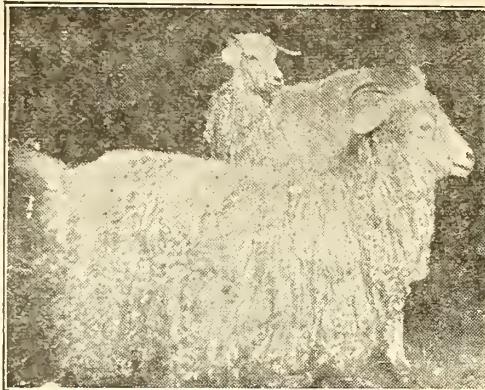
"I guess you'd claim Cæsar if you 'ad a chance."

"Shure. All good fightin' men are Irish."

"Well," said the Englishman, as a clincher, "to go back further, wa'at would you do with Balaam?"

"Oh, that's all r-right," retorted the Irishman. "Balaam wa'as Irish, but th' ass wa'as English."—*New York Times*.

ANGORA GOATS.



PHOTOGRAPH OF MY GOATS.

Grade your goats up with the best bucks. I now have for sale a few fine Angora Bucks well covered with mohair, and sired by the registered BAILEY BUCK, at the head of my flock, registered in the Angora Breeders' Association Record, No. 10,213, bred by C. P. Bailey Sons Company, the largest Angora breeders in America. This buck is guaranteed to shear from 8 to 10 pounds mohair. I will pay 50c. per pound for all mohair sheared from these bucks this spring.

\$20.00 apiece, f. o. b. Rock Castle, Va. Well crated and bedded. Address

M. S. VALENTINE, Rock Castle, Va., or
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CISMONT STOCK FARM offers well developed young Dorsets of the best blood of England and America.

Prices Reasonable.

G. S. LINDENKOHL, Keswick, Albemarle Co., Va.

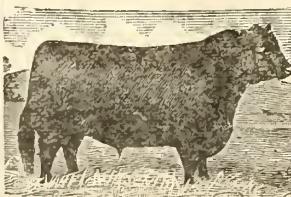
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DORSET SHEEP.

Breeding DORSETS our business for 12 years. We can now offer Dorsets of high quality. Our ewes lamb in the fall. We have fall lambs now ready. Last season these lambs weighed 135 pounds in June. Allow us to insist that you buy only GOOD SHEEP when you buy Dorsets. Dorset sheep have a special place in Virginia. No other breed can take their place in the early lamb business. Write us for facts to prove this. We ship our sheep on approval.

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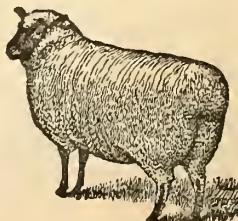
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The choicest lot of young bulls in Southwest Virginia, all out of prize winning families at low prices. Do you want a bargain? If so, come and see us, or Address W. P. ALLEN, Prop. of Glen Allen Stock Farm, WALNUT HILL, VA.

ESSEX PIGS.

Some fine ones, not related; from recorded stock, also Southdown and Hampshire-down Lambs. Address

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Headquarters for GOLDEN LAD JERSEYS,

Also Get of TREVARTH and GEN. MARIGOLD. ★ ★ ★

GOLDEN LAD'S SUCCESSOR. First and sweepstakes over all at the Pan-American Exposition, the champion JERSEY BULL OF AMERICA, and out of Golden Ora, our great prize-winning cow, both born and developed on these Farms, is among our service bulls.

Biltmore Jerseys are a combination of large and persistent milking qualities with an individuality that wins in the show ring.

SPECIALTY. Write for descriptive circular of the best lot of young bull calves ever offered, both for breeding and individuality. They are by noted sires and out of large and tested selected dams. Many of these calves are fit to show and win in any company.

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OFFERS FOR A LIMITED TIME ONLY AT \$1.00 EACH:

400 Barred Plymouth Rock Cockerels and Pullets.

100 S. C. Brown Leghorn " " " .

50 White Leghorn Pullets.

30 " Wyandotte Cockerels.

30 " Plymouth Rock Cockerels.

76 Silver-Laced Wyandotte Cockerels and Pullets.

10 Black Minorca Cockerels.

This stock is well-bred and will give satisfaction. Also offer 25 BARRELS of WHITE FRENCH and JERUSALEM ARTICHOKEs at \$2.00. Try them now so you will be ready when it is time to plant.

P. H. HEYDENREICH, Prop., ∴ ∴ ∴ Staunton, Va.

ALMOST THE SAME.

The waking hours of G. Otto Krupp were spent in thinking of schemes whereby he might get rich quick. As the owner of an eight-mile railroad he was a person of considerable local importance in the Pennsylvania-German settlement where he resided.

One morning when Mr. Krupp's brain was particularly active it occurred to him that by sending passes over his road to the presidents of the big railroads of the country he might receive complimentary passes in return. This would enable him to see something of the world at comparatively small expense, and such passes as he could not use personally he could dispose of advantageously. Mr. Krupp lost no time in getting letter-heads printed with his own name in large type as president. Then he sent "R. and A." passes broadcast and awaited results.

One hot afternoon a flushed representative of a big Western road walked into Mr. Krupp's office and said he had been all over town looking for the "R. and A." railroad and could not find it. He said he was sent from Philadelphia to investigate before the company issued a pass over its entire line.

"It is chust outside of town—five minutes' walk," explained Mr. Krupp suavely.

"How long is your road?" asked the railroad's representative.

"About eight miles, I t'ink."

"Thunder! You don't expect us to exchange passes with a road like that, do you?" the representative demanded angrily. "Why, we have eight thousand miles of road."

"Vell," answered Mr. Krupp, drawing himself up with an air of offended dignity. "maybe my road ain't so long as yours, but it's chust as vide."—Caroline Lockhart, in December Lippincott's.

NOT DANGEROUS.

"Boy," said the self-appointed adviser, "don't he so careless with that gun."

"Oh, it will not hurt you," answered the boy indifferently.

"Yes, that's what they all say," continued the adviser, "but it is always the empty gun that kills."

"Well, you needn't be disturbed then," replied the gunner, "because this one is loaded with huckshot in both barrels."—January Lippincott's.

GAINESVILLE, FLA., Nov. 14, 1903.
Griffith & Turner Co., Baltimore, Md.

Gentlemen:—Having done business with you for the past few years I find you are very reasonable in prices and prompt in shipments. Being located in Baltimore have a very low freight rate to the South. Shall always patronize you when in need of anything in your line.

Respectfully,
W. H. BRAEGER.

The "Acme" Pulverizing Harrow is the cheapest or lowest priced riding harrow on the market.



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LEHMAN CARRIAGE
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Universally recognized as the STANDARD make. Avoid WINTER discomforts by heating your Carriage, Wagon or Sleigh with one of the LEHMAN HEATERS. It burns LEHMAN coal at a cost of 1-4 cent per hour, or 2 cents per day, and there is no smoke, smell nor danger of fire from same.

HORSEMEN everywhere use and recommend them, which in itself is a GUARANTEE of their usefulness, and their high standard.

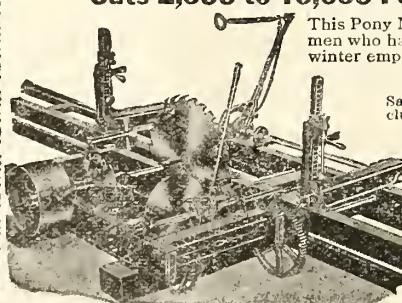
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Cuts 2,000 to 10,000 Feet per Day. 4 to 20 h.p.



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Our Mill Machinery Line includes Shingle Mills, Planers, Edgers, Trimmers, Stave Mills, Lath Mills, Water Wheels, Portable Grinding Mills, Shafting, etc. Ask for Saw Mill and General Machinery Catalogue. Mailed free for the asking.

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Box 600, Atlanta, Ga.

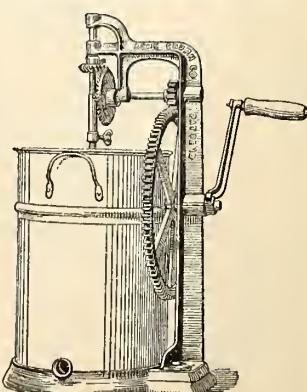
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SAVES TIME, LABOR
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The most modern and up-to-date churn on the market. 5 to 10 minutes all the time required.

Fuller description in Southern Planter April, May and June 1903. Write for prices, stating size wanted.

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18TH & MAIN STREETS, - RICHMOND, VA.

We quote prices on a few articles in our enormous Holiday Stock.

Look over the list and send us your orders. If you don't see what you want mentioned here, write for prices on it.

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Florida Oranges25	doz.	New Orange Peel	12	1-2	lb.
California Oranges12	doz.	New Lemon Peel	12	1-2	lb.
Fine Apples .....	.25	pk.	Choice Evaporated Peaches, 9c, or 3 lbs for	.25		
Large Lemons .....	.12	doz.	Fresh Country Butter .....	.22	lb.	
Best French Candy .....	.15	lb.	N. C. Corn Whiskey	\$2.00	gal.	
Choice French Candy .....	.12	1-2	7-year-old Maryland Rye	4.00	gal.	
Good French Candy .....	.8	and .10	Old Crown Rye	3.00	gal.	
Plain Mixed Candy .....	.08	lb.	Old Keystone Rye	2.50	gal.	
Chocolate Drops .....	.15	lb.	Old Excelsior Rye	2.00	gal.	
Fine Buttercup Candy, 5-lb. pails.....	.75	each	Old Capitol Rye	1.50	gal.	
Sultana Raisins .....	.10	and .12	1-2	lb.		
Best New London Layer Raisins.....	.10	lb.	California Sherry Wine	1.00	gal.	
New, Clean Currants .....	.8	and .10	Imported Sherry Wine	3.00	gal.	
Best Muscatel Raisins .....	.09	lb.	Catawba Wine .....	.45	gal.	
New Seeded Raisins .....	.10	lb.	Jamaica Rum	3.00	gal.	
New Figs .....	.08	lb.	New England Rum	2.50	gal.	
New Figs, 1-lb. package.....	.10	lb.	Virginia Apple Brandy, 4 years old.....	3.00	gal.	
New Dates, 6 lbs. for .....	.25		Maryland Apple Brandy	2.50	gal.	
New Dates, 1-lb. packages.....	.06		B. B. Brandy .....	.45	gal.	
New Mixed Nuts .....	.12	lb.	Port Wine	1.00	gal.	
Best Soft Shelled Almonds .....	.15	lb.	Pure Apple Cider .....	.25	gal.	
Best Shelled Almonds .....	.30	lb.	Geneva Gin	2.50	gal.	
Best Pecans .....	.12	1-2	Holland Gin	2.00	gal.	
Best Filberts .....	.12	1-2	Virginia Mountain Whiskey, 4 years old..	3.00	gal.	
Best Palm Nuts .....	.12	1-2	Duffy's Malt Whiskey .....	.80	bot.	
Best English Walnuts .....	.15	lb.	Wilson Whiskey	1.00	bot.	
Best Cocoanuts .....	.04	each	Fulcher Whiskey	1.00	bot.	
New Citron .....	.14	lb.	Buchu Gin	1.00	bot.	
			Paul Jones Whiskey	1.00	bot.	

These prices are for cash strictly before goods are delivered. Post-office orders or registered letters must accompany all orders.

WE - WANT - TO - BE - YOUR - GROCER.

A trial order will convince you how easy and cheap it is to "go to market" by mail.

PICKLING RATTLESNAKES.

Editor Planter:

Your readers accept with thanks the various recipes for pickles and preserves which you kindly publish from time to time for the benefit of housekeepers. I take pleasure in proffering one which is a departure from "household hints," but work wholly entertaining and highly exciting.

In order to appreciate the delicacy and safety of the undertaking, you will forsake "the green hills of Virginia" and seek the rugged sides of the Rocky Mountains. There you will not buy your material at thirty cents per half peck, but allow some callous ranch man to tread on your "tender foot," and pull your purse-strings to the extent of fifty cents for a common Mason jar, and \$1 for a pint of wood alcohol. Then you are ready for the task of "pickling" rattlers.

You will next seek a ledge, which overhangs a foothill. There the sleepy rattlers assemble in the month of August, where they dose through their temporary blindness. They are easy to catch and not especially dangerous, because if the general uprising of buzzers at an unusual sound, which serves as a warning to an intruder, I was sitting on the veranda of the snug cabin, which had been built for the accommodation of tourists. It rested on the side of a craggy peak, surrounded by picturesque pines and piles of different hued rocks. Lost in admiration of the panoramic view of hill and valley before, an ever-changing delight in color varying from darkest green to pale amber and rich crimson, it was a slight shock to my sensitive ears to be interrupted by a shrill whistle, and not too light foot steps.

The disturber of my dreams was a man of muscular build, tall, straight as an Indian, and dark as an Arab. He was swinging along at an easy gait, a pole slung carelessly over his right shoulder, on which several angry singing rattlers were hung suspended by their necks.

He had lassoed the buzzing array, and was on his way to the ranch shop to display his skill in handling the snakes for the entertainment of the boarders who had gathered in a knot of excretion awaiting his arrival. I followed, and after many tests of our host's ability to "handle them fellers" was rewarded with the following: Slack the cord which holds the snakes' head in tow, so he can rear to the height of a foot, no more, or he might coil and surprise you. Take a forked stick, thrust it close under the jaws, leaving the end you hold long enough to handle him with safety. When his neck is thus pinioned his head is immovable then lift him carefully and deposit him head first in the jar of alcohol and water. The solution must be two-thirds alcohol only, too strong would spoil the beautiful skin color of your pickle. Hold the stick firmly until the snake is under the solution, then slowly withdraw it, and you will

THE EASY WAY

PLANTING

HOEING

CULTIVATING.

THE "PLANET JR." No 4 Combined Drill does gardening "the easy way." It has been brought to such a high state of perfection that it is now absolutely indispensable to best success in gardening and truck farming. It sows accurately in row and drops accurately in hills—four, six, eight, twelve, or twenty-four inches apart. The feed is automatically stopped by simply raising the plow out of the ground and it starts work again when the plow does. Sows or drops all kinds of garden and vegetable seeds. In addition to planting the seed it cultivates astride or between the rows, throwing earth to or from, and plows, opens furrows, hills up, etc. Undeniably the best general purpose tool obtainable at any cost for the private gardener or trucker.

THE "PLANET JR."

No. 12 Double Wheel Hoe is conceded to be the best made. It also does the work "the easy way." With its great variety of attachments, it is suited to all hand garden and truck farm work. Cultivates all plants astride or between the rows, whether in common or drill or hills. Throws the earth to or from, opens furrows, breaks up the top crust, and kills all weeds as fast as a man walks. Handles are adjustable to fit man or boy. Makes gardening and trucking easy and profitable. Saves expensive hand labor. The price is so low as to put it within the easy reach of all. Write today for our new 14th Catalogue. It shows the full "Planet Jr." line embracing Plain and Combined Seeders, Wheel Hoes, Hand Cultivators, Walking Cultivators, Harrows, One and Two-Horse Riding Cultivators, Sugar Beet Cultivators, etc. More than 100 illustrations, including 16 beautiful half-tones showing home and foreign farm and garden scenes.

Free by mail for the asking.

S. L. ALLEN & CO.,
Box 1107-X
Philadelphia, Pa.

IRON

For over two generations the Iron Age implements have been helping farmers to do better. Every year in that time we have been making these labor savers better than before. To-day they are successful beyond question; durable beyond comparison; economical beyond doubt. No. 6. Iron Age Double and Single Wheel Hoe, Drill and Soeder.

Improved Robbins Potato Planter.

No. 60. Iron Age Pivot Wheel Hill Cultivator.

Write to-day for a free copy of the New Iron Age Book; full of facts that will save you money. Use and strength all through the year.

BATEMAN MFG. CO., Box 167, Grenloch, N. J.

"NEW UNIVERSAL" LINE OF GARDEN TOOLS

6 STYLES SEEDERS

Double or Single Wheel hoe, Models of Accuracy.

Opens furrow, drops in plain sight, covers, marks.



Note High Arch and Plant Guards. Bent Oak Handles on all Tools.

Details on full line tools in 1904 free catalogue. Write for it.

AMES PLOW COMPANY, 56 MARKET STREET, BOSTON, MASS.

For Sale by GRIFFITH & TURNER CO., Baltimore, Md.

6 Tools in 1.

Combined seeder, marker, hoe, rake, plow, cultivator. Single or double wheel. Every adjustment easily made. For planting and all kinds of cultivation.

Wheel Plows

With cultivator, rake and hoe attachments. For garden and poultry yards.

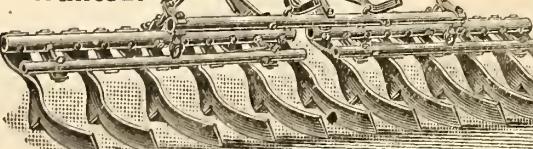
WHEEL PLOWS, BOSTON, MASS.

ACME Pulverizing Harrow

Clad Crusher and Leveler.

SIZES
3 to 13½ feet

Agents
Wanted.



The best pulverizer—cheapest Riding Harrow on earth. We also make walking ACMES. The Acme crushes, cuts, pulverizes, turns and levels all soils for all purposes. Made entirely of cast steel and wrought iron—indestructible.

Sent on Trial

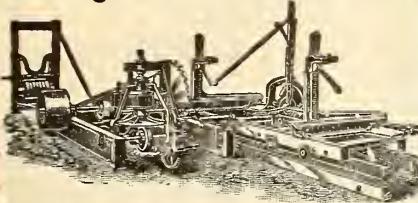
To be returned at my expense if not satisfactory. Catalogue and Booklet, "An Ideal Harrow" by Henry Stewart, mailed free.

I deliver f.o.b. at New York, Chicago, Columbus, Louisville, Kansas City, Minneapolis, San Francisco, Portland, etc. DUANE H. NASH, Sole Manufacturer, Millington, New Jersey.

Branch Houses: 110 Washington St., Chicago. 240 7th Ave. So., Minneapolis. 1316 W. 8th St., Kansas City.

PLEASE MENTION THIS PAPER.

FARQUHAR VARIABLE Friction Feed SAW MILL,

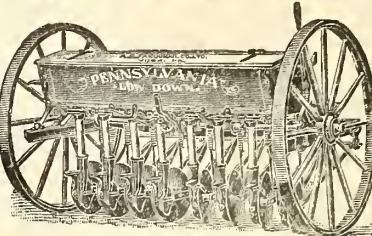


ward by means of the Reamy patent feed and backing device.

ALL ABOUT THEM IN THE CATALOGUE.

Pennsylvania Disk or Hoe Drill.

This Low-Down Disc Grain and Fertilizer Drill is mounted on a steel frame, giving it great strength and lightness. Each disc works independently and has an adjustable coil spring pressure of its own-enables the disc to cut its way through corn stalks, stubble, weeds, grass, etc. It is sure to put in the seed every time. Chain drive for grain, grain, grass, etc. No gear. Disk feed power from center of main axle. No jolt-saves horses' necks. Accurate grain, grass, phosphate, and land measure.



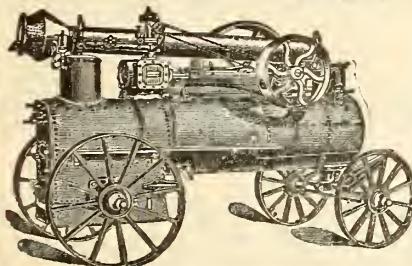
LOW DOWN, EASY TO FILL.

Here is a name

"FARQUHAR"

that stands for merit.

"IMPROVED" AJAX THRESHING ENGINE.



This portable Engine is made most carefully of the best material. The Boiler is made of the best grade of boiler steel, tensile strength, 55,000 to 65,000 pounds. The steel fire boxes are strongly riveted and tested at double the strain they will ever be required to use. No Farquhar Boiler ever exploded. The engine parts are of the most improved patterns, and of the best material known. You ought to know about this engine.

FARQUHAR LOW-DOWN VIBRATOR SEPARATOR



threshes more rapidly, saves all kinds of grain and delivers it in better condition than any other made. No cracking or wasting of grain. The separating capacity is very large and the machine cannot be crowded. It will easily take care of all the grain that can be put through the cylinder without wasting power. We build separators of seven different sizes, all described in the catalogue. We also make Clover Huller Att. chaffcut.

All these things fully described in the catalogue. It is free.
Also full line including all kinds of farm machinery.

A. B. FARQUHAR CO., (Limited) YORK, PA.

see the reptile partake of man's instinctive desire to cater to his appetite. He will drink until he is "full."

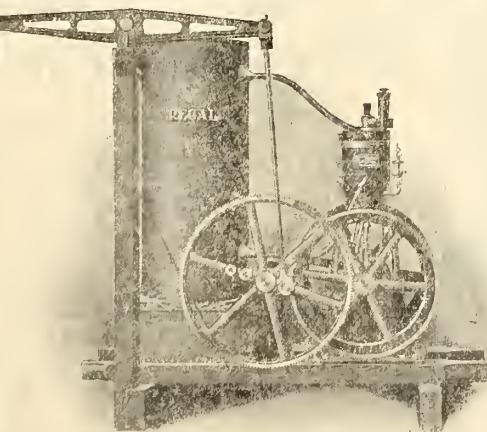
By the time he is through with refreshing himself, he is a size larger, and the jar emptied of one-fourth of its contents. The rattler is now drugged into permanent insensibility, is thoroughly pickled, and will keep for all time.

The jar is filled, sealed and stored away on the shelf of the shop, which is already well covered with mountain curios, or is perhaps taken away by some tourist who is willing to travel with so gruesome a souvenir.

NORVELLA ROUTT REYNOLDS.

Undoubtedly a good many of our readers have horses that are spavined, ringboned, or blemished in some manner, and have never yet replied to the advertisement of Fleming Bros., which has appeared in this paper for a long time. This firm manufactures a line of veterinary remedies, spavin cures, fistula and poll evil cure, lump jaw cure, etc., guaranteeing every preparation to do the work it is intended to do. A sixty-four page illustrated booklet entitled "Stock Ailments That You Can Cure," will be mailed free to those who will write Fleming Bros., Chemists, Union Stock Yards, Chicago, Ill., mentioning this paper.

GASOLINE ENGINES



That do reliable work are our specialty. Many manufacturers claim many things, some that are not well founded. We guarantee our engines to do what we claim for them.

Wind - Mills,
Tanks, Rams,
Iron and Wire
Fences, Pumps.

SYDNEY PUMP & WELL CO., Inc.
Box 949. RICHMOND, VA.

... 2,000,000 ELBERTA PEACH TREES ...

We offer 2,000,000 Elberta June Buds, besides a large stock of Belle of Georgia, Mamie Ross, Carmen, Green-boro, etc. Big assortment of 2-year Pear and Cherry, and small fruit plants. Write for Catalogue.

CHATTANOOGA NURSERIES, Chattanooga, Tenn.

REFERENCES: Hamilton Trust & Savings Bank; N. Dietzen & Bro., Chattanooga; Dunn's Mercantile Agency; Southern Planter.

EIGHT GREAT SECRETS OF SUCCESS.

A certain fellow who answered advertisements in cheap story papers has had some interesting experiences. He learned that by sending \$1 to a Yankee he could get a cure for drunkenness. And he did. It was to "take the pledge and keep it."

Then he sent fifty two-cent stamps to find out how to raise turnips successfully. He found out—"Just take hold of the tops and pull."

Being young, he wished to marry, and sent thirty-four one-cent stamps to a Chicago firm for information as to how to make an impression. When the answer came it read: "Sit down on a pan of dough." It was a little rough, but he was a patient man, and thought he would yet succeed.

The next advertisement he answered read: "How to double your money in six months." He was told to convert his money into bills, fold them, and he would see his money doubled.

Next he sent for twelve useful household articles, and he got a packages of needles.

He was slow to learn, so he sent \$1 to find out "how to get rich." "Work like everything and never spend a cent," and that stopped him.

But his brother wrote to find out how to write without pen or ink. He was told to use a lead pencil.

He paid \$1 to find out how to live without work, and was told on a postal card: "Fish for suckers, as we do."

HAD REASON TO GRUMBLE.

If we were really to reason it out, many of us have about as much cause to grumble as the farmer in the following story. He was a rich farmer; his barns were overflowing with grain and hay. One day, during a fine harvest season, his pastor met him and congratulated him on the fine weather.

"Oh, I don't know about that," was the sulky rejoinder.

"Why, man, look at the crops!" exclaimed the preacher reprovingly. "Everything has gone splendidly all over the country. Why, what fault can you find?"

"Well," growled the man, "there won't be no spiled hay for the calves to eat."

When you wake up in the morning of a chill and cheerless day,

And feel inclined to grumble, pout or frown,

Just glance into your mirror and you will quickly see

It's just because the corners of your mouth turn down.

Then take this simple rhyme—Remember it in time:

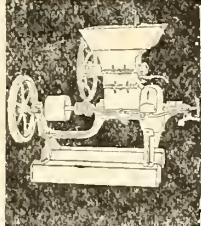
It's always dreary weather in country-side or town

When you wake and find the corners of your mouth turned down.

—Youth's Companion.

A neat Binder for your back numbers can be had for 25 cents. Address our Business Office.

GRINDS SNAP CORN

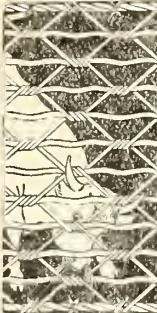


Corn in the ear and all grains, any sort of chop mixture. For speedy and perfect work, saving feed and labor, the all-purpose grinding mill is the

Fine SCIENTIFIC Quick

Made in a variety of styles, including Power Mills, Sweep Mills, Tilt and Power Combined. The line that meets feeders' wants and is right in price. Don't buy until you have seen our late catalogue. Mailed free. Write for it to-day.

THE FOOS MFG. CO., Springfield, Ohio.
RICHMOND ATLANTA NASHVILLE NEW ORLEANS



How To Test Coiled Spring Wire.

Take a piece of No. 12 wire and coil it firmly around an inch rod of iron, as shown in figures 1 or 2. Try to pull the coil out of it. You may think you have done so, but upon releasing it will assume shape as shown in figure 3. Then look along the wire as you would a gun barrel; it will appear as shown in figure 4—has the appearance of a tube. This explains the great advantage of COILED SPRING WIRE and how it provides for contraction and expansion.

The weave of our fence is so perfect that full strength of every wire is preserved. Every twist is an expression of strength. Good enough to last a lifetime. We make it

HORSE HIGH, BULL STRONG, PIG AND CHICKEN TIGHT,

Using only High Carbon Heavily Galvanized Coiled Spring Steel Wire; to get this good enough we make it ourselves. Best wire makes the best fence. We ship any style of fence we make

DIRECT TO THE FARMER ON 30 DAYS TRIAL, AT FACTORY PRICES, Freight prepaid. Please write us. We want to send you our Catalogue. It is free.

KITSELMAN BROTHERS, Box 270, Muncie, Indiana, U. S. A.

VIRGINIA DIVISION.

Farmers Mutual Benefit Association

A Fire Insurance Association, chartered by the State of Virginia, for farmers, under an amended and well protected plan.

Insures in counties surrounding and accessible to Richmond, against Fire and Lightning, only country property—no stores or unsafe risks. Policy-holders amply secured—all legitimate losses paid. Average cost per year less than other plans, and a great saving to farmers. Amount of property now insured, \$330,000, and increasing yearly. Estimated security in real and other estate, \$750,000.

For further information, address,
MENTION THIS JOURNAL.

CHAS. N. FRIEND, General Agent,
CHESTER, VIRGINIA

ASSETS, \$900,000.

Virginia Fire and Marine

Insurance Company, of Richmond, Va.

Insures Against Fire and Lightning.

All descriptions of property in country and town, private or public, insured at fair rates, on accommodating terms.

AGENCIES IN EVERY TOWN AND COUNTY.

W. H. PALMER, President.

W. H. McCARTHY, Secretary.

CHARTERED 1870.

MERCHANTS NATIONAL BANK

OF RICHMOND, VIRGINIA.

Capital Stock, - - - - \$200,000.00

Surplus and Profits, - - - - \$672,445.75

Designated Depository of the United States, City of Richmond and Commonwealth of Virginia.

Being the Largest Depository for Banks between Baltimore and New Orleans, this Bank offers superior facilities for direct and quick collections.

JNO. P. BRANCH,
President.

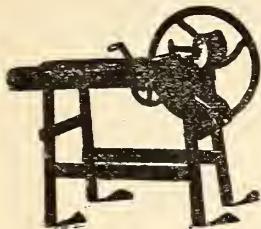
JNO. K. BRANCH,
Vice-President.

JOHN F. GLENN,
Cashier

Latest Improved FARM IMPLEMENTS.

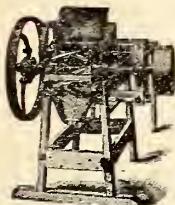
HAND POWER CUTTER.

These machines sell at sight. They have heavy fly wheels and make three cuts to each turn of the crank. They will cut hay, straw or fodder, and will cut from $\frac{1}{2}$ to 2 inches. They are shipped K. D., securing the lowest possible freight rates.



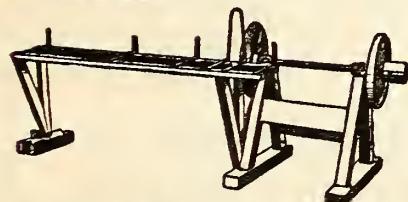
LITTLE GIANT CORN SHELLER.

The frame is made of thoroughly dry hard wood. The joints mortised tenoned and bolted. The bearings are bolted on the frame instead of screwed. The iron work is made from the very best material, every piece is carefully inspected before being put on. This machine is high-grade all the way through. It is handsomely painted, striped and varnished.



ROSS....

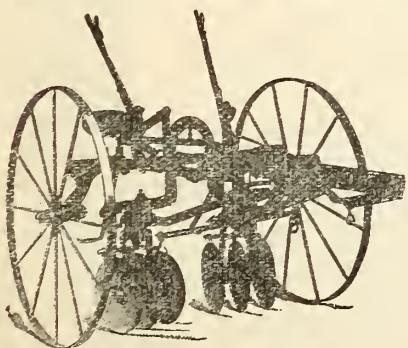
Fodder Cutters, Fodder Shredders, Cutters for all purposes, Corn Shellers, Grinding Mills, Horse Powers and Wood Saws.



Wood Saws for long or short wood. Wood or Steel frame.



Kemp's Improved Manure Spreader. Three Sizes.



Bement Disc Cultivator,

with 6 or 8 Discs.

Built entirely of steel, steel forgings and malleable iron. The most simple and easiest adjusted cultivator on the market to-day. Write for circulars and testimonials.

Send for our Catalogues and Prices on any Implements you may need.

WOOD HARROWS—All sizes.

DISC HARROWS—All sizes.

SPRING TOOTH HARROWS—All sizes.

ACME HARROWS—All sizes.

Harrows of all styles kept in stock at lowest net prices.

One and Two-Horse Planter, Plain or with Fertilizer Attachment.

Special prices given on Studebaker and Brown Wagons, Buggies and Carts.

Studebaker Buggies, all styles, Studebaker Carriages, Studebaker Carts, Studebaker Runabouts.

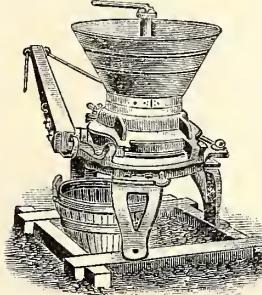
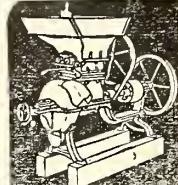
Frick and Aultmen and Taylor Engines, Saw Mills and Threshers.

"SCIENTIFIC FEED MILLS, All Sizes."



The SCIENTIFIC Grinding Mills.

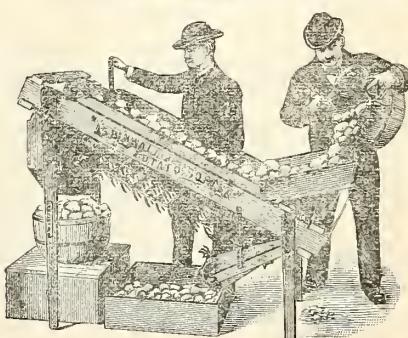
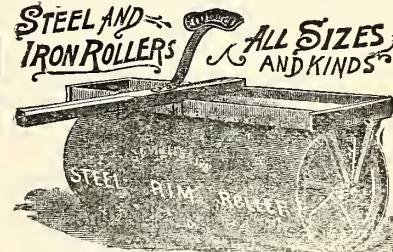
Are unequalled for grinding ear corn, shucks on or off, Corn, Oats, Wheat and all other grains, single or mixed.



POWER MILLS in five sizes, 2 to 30 horse-power

Scientific Sweep Mills in five sizes, Geared—plain and combined, with horse-power.

Aspinwall Planters, Potato Sorters and Cutters.



Aspinwall Planters, Potato Sorters and Cutters.

Aspinwall Potato Planter.

Automatic, Accurate and Reliable. Used by thousands of practical growers the world over. Over twenty years on the market. Don't be fooled by imitations and make-shifts, but write for attractive illustrated catalogue.

HENING & NUCKOLS, Successors to CHAS. E. HUNTER, 1436-38 E. Main St., RICHMOND, VA.

A GOOD PIOS TALK.

"Brother," said a member of the flock to the shepherd, "I wish you would drop in at my house some day on your rounds. I feel like it would do me good to have a *good pious talk* with you."

The pastor kindly assented to the request, and a few days later was seated in the little parlor conversing with the good lady while awaiting the return of the good man from the fields.

Suddenly there arose a great commotion at the barn. Horses ran madly about the lot, the geese cackled their loudest, chickens flew into trees, and the solemn conversation at the house was interrupted by a powerful shouting: "Here, you confounded black niggers, why don't you come here and help put up these cussed horses? Hurry up, I tell you, or I'll punch your miserable hides with this pitchfork, you blamed black rascals. Whoa, Jack, you!"

"Pa, Pa!" shouted his daughter, running towards him, "Pa, the pre—"

"Shut up your gab, Mandy, and get back in the house, or—"

"But, Pa, the preacher is in the house."

After a short and very quiet interval a heavy step sounded on the porch, the front door was pushed open, and the brother came in, singing joyously:

"Amazing grace, how sweet the sound,
That saved a wretch like me!
I once was lost, but now am found—
Was blind, but now I see?"

He happened to glance into the room where his guest was seated; then, with outstretched hands, he greeted him heartily, exclaiming in utter astonishment, "Why, brother, I had no idea you was anywhere about here or I wouldn't 'a' been a-singin' so."—Bruce Craven, in *Christmas Lippincott*.

SECRETS OF A LONG LIFE.

You sometimes see a woman whose age is as exquisite as was the perfect bloom of her youth. You wonder how this has come about. You wonder how it is her life has been a long and happy one. Here are some of the reasons:

She knew how to forget disagreeable things.

She kept her nerves well in hand, and inflicted them on no one.

She mastered the art of saying pleasant things.

She did not expect too much from her friends.

She made whatever work came to her congenial.

As evidence of the fact that the "Acme" Pulverizing Harrow is an excellent tool we point to the fact that there are probably one quarter of a million of them in use to-day.

We acknowledge receipt of a copy of the Congressional Directory from Senator T. S. Martin with thanks for the courtesy.

Your money back

if you are not satisfied

DO YOU SUPPOSE that a company with a capital of \$500,000.00, paid in full, and the proud reputation of 36 years of continuous success, would make such an offer and not carry it out to the letter?

DO YOU SUPPOSE we would jeopardize our standing with the public and our chances of still greater success by failing to fulfil any promise we make?

DO YOU SUPPOSE we would make such an offer if we did not have the utmost confidence in the satisfying quality of our goods?

WE KNOW we can please you and save you money, for HAYNER WHISKEY goes direct from our distillery to you, with all its original richness and flavor, carrying a UNITED STATES REGISTERED DISTILLER'S GUARANTEE of PURITY and AGE and saving you the big profits of the dealers. That's why it's best for medicinal purposes. That's why it's preferred for other uses. That's why we are regularly supplying over a quarter of a million satisfied customers. That's why YOU should try it.

Direct from our distillery to YOU
Saves Dealers' Profits! Prevents Adulteration!

HAYNER WHISKEY
PURE SEVEN-YEAR-OLD RYE
4 FULL QUARTS \$3.20 EXPRESS PREPAID

We will send you FOUR FULL QUARTS of HAYNER'S SEVEN-YEAR-OLD RYE for \$3.20, and we will pay the express charges. When you receive the whiskey, try it and if you don't find it all right and as good as you ever drank or can buy from any body else at any price, then send it back at our expense and your \$3.20 will be returned to you by next mail. How could an offer be fairer? We take all the risk and stand all the expense, if the goods do not please you. Won't you let us send you a trial order? We ship in a plain sealed case; no marks to show what's inside.

Orders for Ariz., Cal., Col., Idaho, Mont., Nev., N. Mex., Ore., Utah, Wash. or Wyo., must be on the basis of 4 Quarts for \$4.00 by Express Prepaid or 20 Quarts for \$16.00 by Freight Prepaid.

Write our nearest office and do it NOW.

THE HAYNER DISTILLING COMPANY

ATLANTA, GA. DAYTON, OHIO ST. LOUIS, MO. ST. PAUL, MINN.
156 DISTILLERY, TROY, O. ESTABLISHED 1866.



The Chesapeake & Ohio Railway
Extending from Cincinnati and Louisville, and
THROUGH ITS CONNECTIONS....

THE BIG FOUR SYSTEM, from Chicago, St. Louis, Peoria, Indianapolis, Sandusky and Cleveland;

THE OHIO CENTRAL LINES, from Toledo and Columbus;

THE CINCINNATI, HAMILTON & DAYTON, from Detroit, Toledo, Lima and Dayton—

FORMS THE MOST DIRECT And from Five to Twelve Hours the Quickest **ROUTE.**

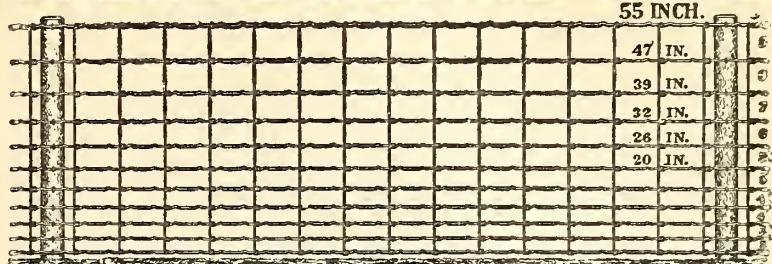
TO STAUNTON, LYNCHBURG, CHARLOTTESVILLE, RICHMOND, PETERSBURG, NORFOLK,

And Principal Virginia Points.

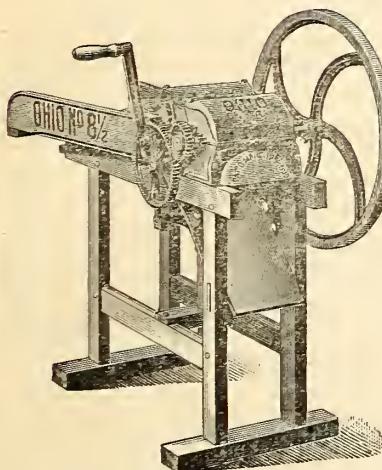
H. W. FULLER, Gen. Pass. Agt. C. & O. Ry., Washington, D. C.

WHY USE DANGEROUS BARB WIRE

WHEN AN
ATTRACTIVE WOVEN
WIRE FENCE
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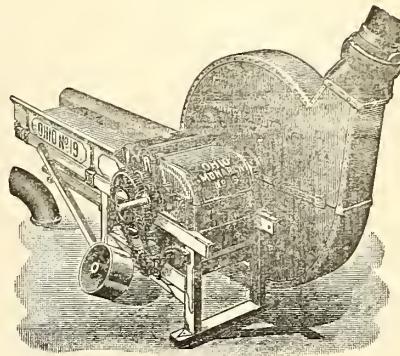
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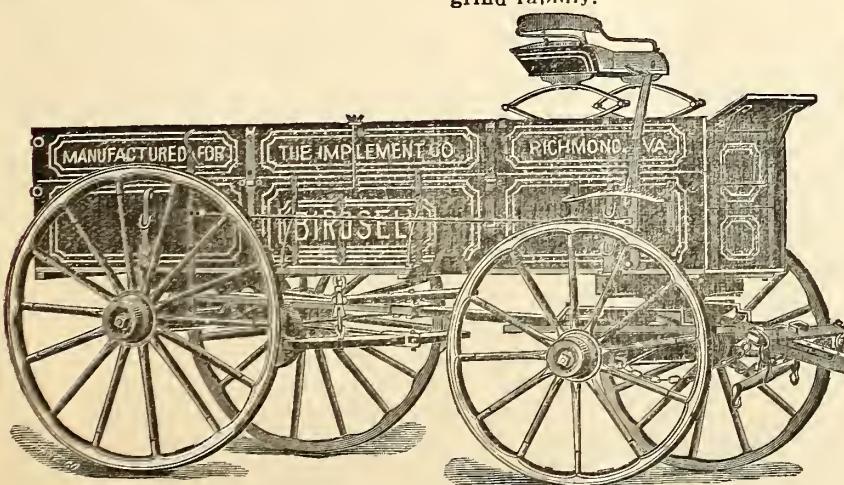
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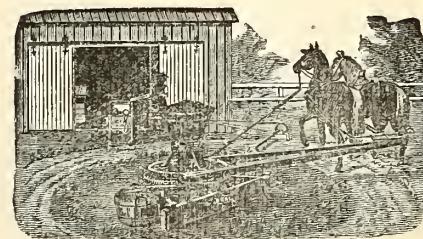
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BUSINESS IS BUSINESS.

Mr. Pecksniff's wife was wrathful. She flew into the bedroom and without any introductory remarks said.—

"William, I'd like to know where our house-girl gets all the fine clothes she's been wearing here of late?" Her tone was commanding. She appeared to want no trifling. Her husband answered coldly,—

"Wife, that is clearly the house-girl's own business."

"William," said Mrs. Pecksniff, "we can't afford to be indifferent about this matter. All the neighbors are talking about it."

"That's their business," replied Mr. Pecksniff.

"Well," said Mrs. Pecksniff indignantly, "if you don't speak to her about it, William, I'm going to speak to her myself."

"That's your business," said Mr. Pecksniff.

Mrs. Pecksniff burst into tears. Between sobs she said:

"William, I hate to tell you, but the people are saying that you gave Bridget her clothes. Oh William, William, what do you think of that?"

Mrs. Pecksniff's misery was complete when her husband without the least sign of emotion calmly replied,—

"That's my business."—Sils Xavier Floyd, in December Lippincott's.

LITTLE RED RIDING-HOOD.

Little Emily Kingsbury, aged four, who attends the kindergarten and calls it the "kidney-garden," was being examined as to the senses.

"What are your ears for, Emily?"

"To hear with," was the answer.

"And what are your eyes for?"

"To see with."

"And what is your nose for?"

"To blow," was the innocent answer.

—December Lippincott's.

"Crop Growing and Crop Feeding."

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THE UNQUIET SEX.

That Bessie is an indefatigable exponent of the strenuous life is a fact fully realized by her exhausted family. They follow in the wake of her small investigating person with remonstrances and soothing ointments from the rising to the setting of the sun. She has an elder brother who has learned to look upon her activity more in sorrow than in anger.

One Sunday noon he stood gravely before the fire, his youthful mind big with recollections of the morning's lesson and his teacher's insistence upon the sin of Sabbath-breaking, when suddenly his eye fell upon the incorrigible Bessie. There she sat on the floor in one corner of the room, her chubby face all frivolity and smiles, dolls to the left of her, dolls to the right of her, and a kitten ecstatically plunging after a piece of string the other end of which her pink hands held. One glance was enough for the elder brother, and he strode at once towards the prodigal.

"Bessie," he demanded sternly, "do you want to go to Hell?"

Without a moment's hesitation the string was dropped, up scrambled the fat little legs, and off trotted Bessie towards the door, calling over her shoulder.—

"Jus' wait till I get my hat, Ha'wy."—Evelyn B. Currier, in Christmas Lippincott's.

THE SAME TO ALL.

Not long ago a man entered a quick-lunch establishment near Herald Square and ordered a portion of cold tongue. While this order was being executed the following dialogues could be heard at short intervals between the various waitresses and the chef.

"Chef, how about my small steak?"

"On the fire!" (This from the chef.)

And then:

"Chef, I've got some liver and bacon coming."

"On the fire!"

The same answer for several other orders.

About this time there was a brief conference between the man who had ordered cold tongue and the waitress who had taken the order.

And then we heard this:

"Chef, how about my cold tongue?"

"On the fire!"

"Well, for goodness' sake take it off!" cried the excited waitress.—Julius Reich, in January Lippincott's.

The sixth annual meeting of the Maryland State Horticultural Society will be held at Baltimore, Md., in Du Shane Post Hall, on January 14-15, 1904. Every one is invited to attend the meetings and place products in the exhibit of fruits and vegetables. A fine list of speakers is announced, and the meeting promises to be most interesting. Mr. J. B. S. Norton, of College Park, Md., is secretary of the society.

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News-Leader, Richmond, Va.	3 00	3 00		

THI-WEEKLY.

The World (thrice-a-week), N. Y.	1 00	1 25		
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WEEKLIES.

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Harper's Bazaar	1 00	1 40		
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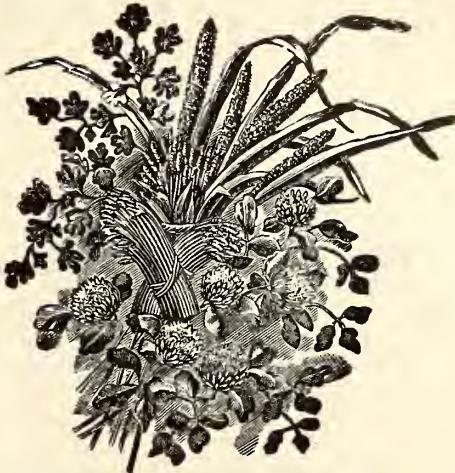
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The SOUTHERN PLANTER, Richmond, Va.

YAWN AND STRETCH.

Medical authority advises this exercise before getting up.

Don't jump up the first thing your eyes are open. Remember that while you sleep the vital organs are at rest; the vitality is lowered and the circulation is not so strong. A sudden spring out of bed is a shock to these organs, especially to the heart, as it starts to pumping the blood suddenly.

Take your time in getting up. Yawn and stretch. Wake up slowly. Give the vital organs a chance to resume their work gradually.

Notice how a baby wakes up. It stretches its arms and legs, rubs its eyes and yawns, and wakes up slowly. Watch a kitten wake up. First it stretches out one leg and then another, rubs its face, rolls over and stretches the whole body. The birds do not wake up and fly as soon as their eyes are open; they shake out their wings and stretch their legs, waking up slowly. This is the natural way to wake up. Don't jump up suddenly: don't be in such a hurry, but stretch and

yawn, and yawn and stretch. Stretch the arms and the legs; stretch the whole body. A good yawn and stretch is better even than a cold bath. It will get you thoroughly awake, and then you will enjoy the bath all the more.

ANECDOTE OF LORD BEACONSFIELD.

An amusing and characteristic story is told of Lord Beaconsfield in the days when he was wooing Mrs. Lewis, to whom in later years of married life he was so touchingly devoted.

One day Mrs. Lewis, who was then living in retirement at her seat in Glamorganshire, saw a gentleman walking leisurely up the drive. "Jane," she exclaimed to an old servant, "I really believe that horrid man, Disraeli, is coming up the drive. Do, please, run to the door and say I'm not at home." Jane opened the door to the undesired caller, and gravely announced her message. "I know," Disraeli coolly answered, "but take my bag to a bedroom and prepare luncheon. I will wait until Mrs. Lewis is ready

to come down stairs," which, of course, Mrs. Lewis felt compelled to do.

"O dear, what can I do with such an obstinate, thick-skinned man?" the widow asked, desperately, later in the day, when Disraeli showed no signs of raising the siege. "Marry him, I suppose, ma'am," was Jane's philosophic answer; and, as the world knows, the persistent wooer had his way in the end in this as in most other things.

"What are you feeding to those hogs, my friend?" the professor asked.

"Corn, professor," the grizzled old farmer, who knew the learned gentleman by sight, replied.

"Are you feeding it wet or dry?"

"Dry."

"Don't you know if you feed it wet the hogs can digest it in half the time?"

The farmer gave him a quizzical look. "Now, see here, professor," he said, "how much do you calculate a hog's time is worth?"

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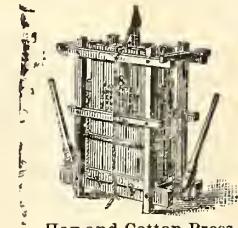
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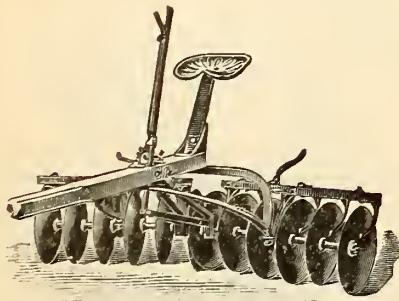
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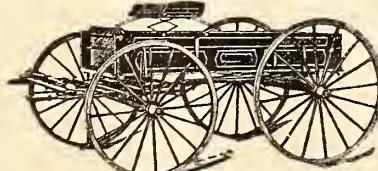
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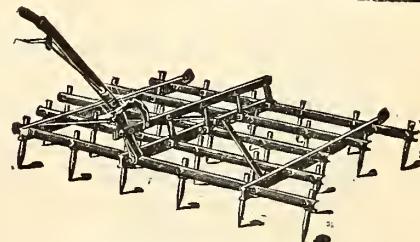
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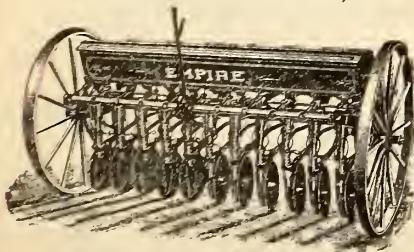
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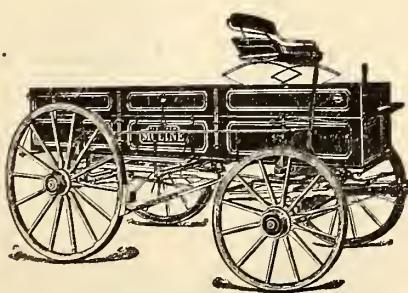
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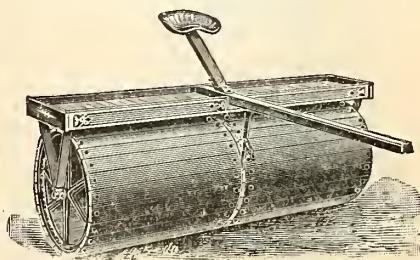
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NOTE.—Kelly is not only richly bred, but he represents the highest type of a trotter, having grand size and the form and finish of a thoroughbred. He is the sire of McChesney, 2:16¾.

FEE, \$25 the season.

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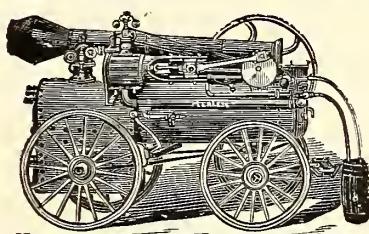
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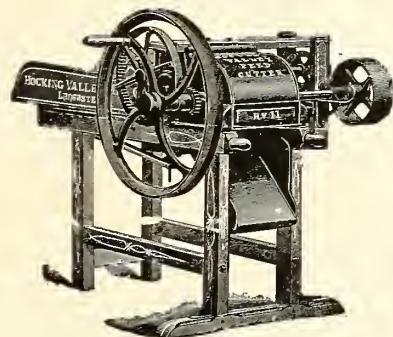
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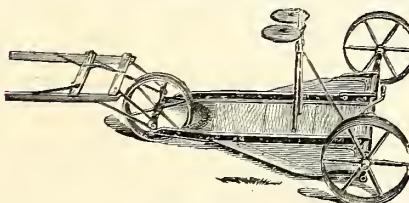
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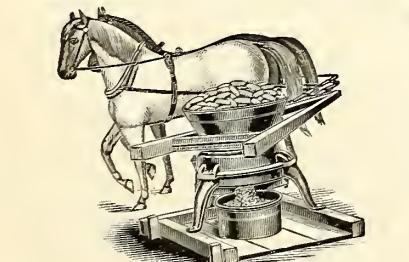
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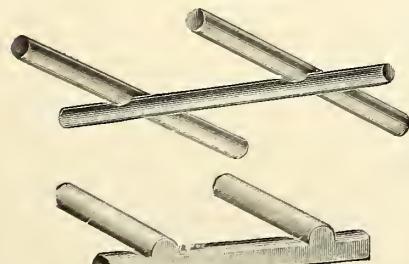
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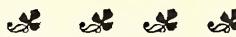
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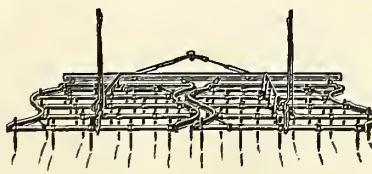
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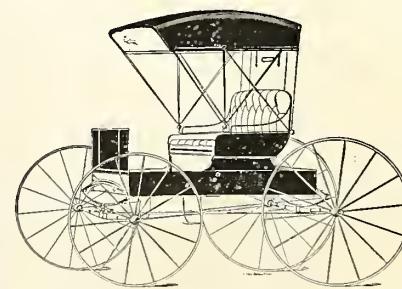
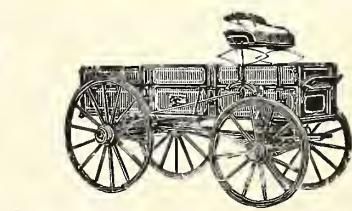
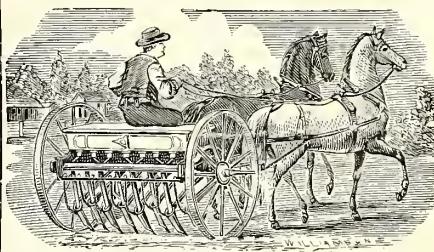
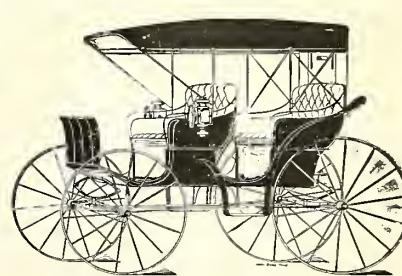
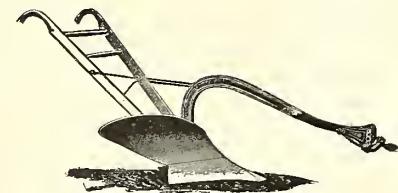
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